
GENERAL VIEW

OF THE

AGRICULTURE

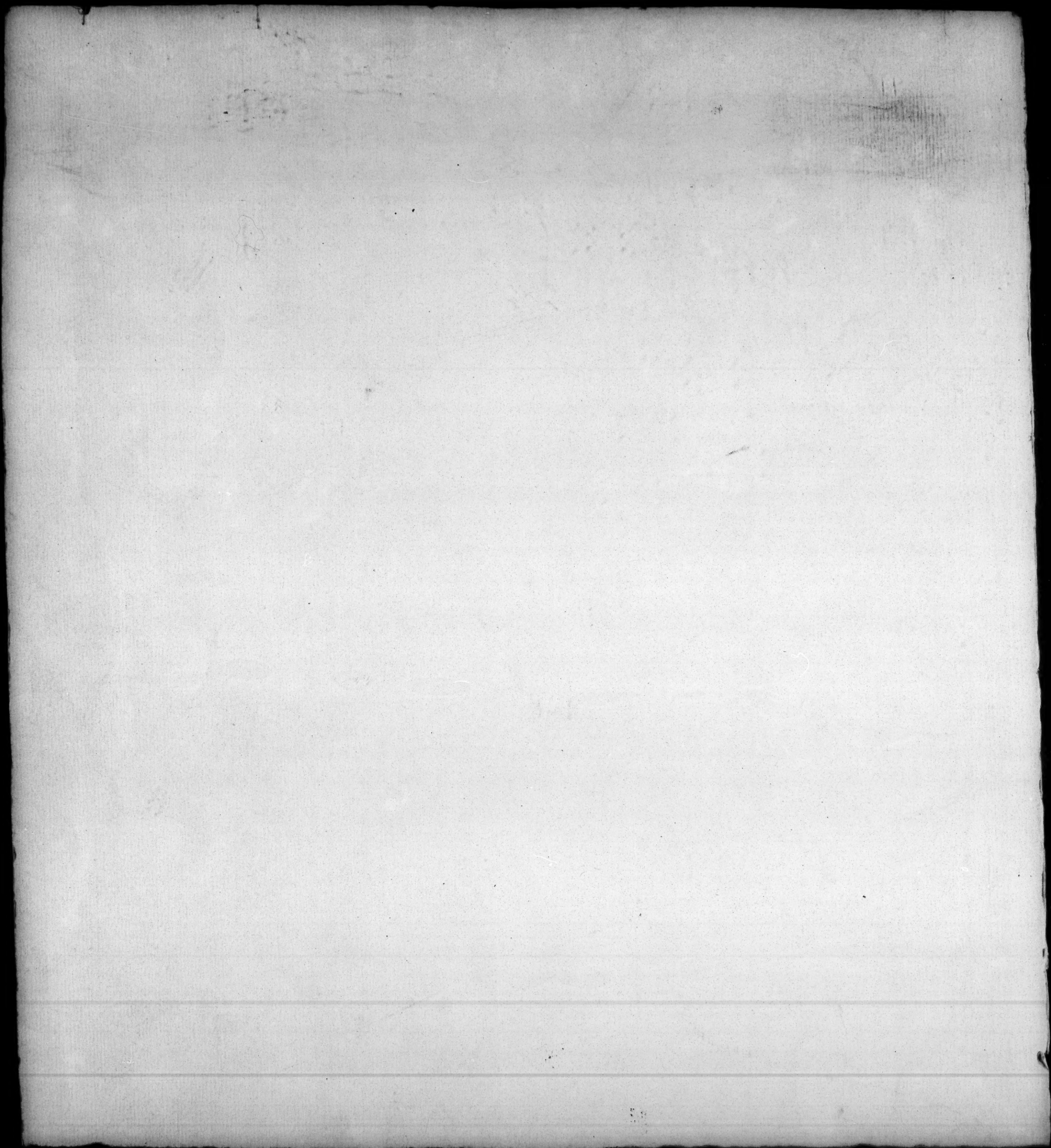
OF THE COUNTY OF

SUFFOLK.

S U E O F K







1

GENERAL VIEW
OF THE
AGRICULTURE
OF THE COUNTY OF
S U F F O L K,
WITH
OBSERVATIONS ON THE MEANS OF ITS IMPROVEMENT.

BY
ARTHUR YOUNG, Esq.

SECRETARY TO THE BOARD.

DRAWN UP FOR THE CONSIDERATION OF THE BOARD OF AGRICULTURE
AND INTERNAL IMPROVEMENT.

LONDON:

PRINTED BY C. MACRAE.

M DCC XCIV.

ADVERTISEMENT.

THE following valuable communication, respecting the present state of Husbandry in the County of Suffolk, and the means of its improvement, drawn up for the consideration of the Board of Agriculture, is now printed, merely for the purpose of its being circulated there, in order that every person, interested in the welfare of that county, may have it in his power to examine it fully before it is published. It is therefore requested, that any remark, or additional observation, which may occur to the reader, on the perusal of the following sheets, may be *written on the margin*, and transmitted to the Board of Agriculture, at its office in London, by whom the same shall be properly attended to; and, when the returns are completed, an account will be drawn up of the state of Agriculture in Suffolk, from the information thus accumulated, which, it is believed, will be found greatly superior, to any thing of the kind, ever yet made public.

The Board has adopted the same plan, in regard to all the other counties in the united kingdom; and, it is hardly necessary to add, will be happy to give every assistance in its power, to any person who may be desirous of improving his breed of cattle, sheep, &c. or of trying any useful experiment in husbandry.

TO
THE ADVERTISEMENT
THE READER.

IT is requested, that this Paper, may be returned to the Board of Agriculture, before the first of March next.

It is hardly necessary to add, that the Board does not consider itself responsible, for any fact or observation contained in these Reports, which, at present, are printed and circulated, for the purpose merely, of procuring additional information, and of enabling every one, to contribute his mite, to the Improvement of the Country.

Jan. 1794.

S U F F O L K

Is a maritime county, which gives the title of Earl to the family of Howard; and, during the Saxon heptarchy, belonged to the kingdom of the East Angles. It is now in the province of Canterbury, diocese of Norwich, and is included in the Norfolk circuit. It is 55 miles long, 35 broad, and 230 miles in circumference; containing 1460 square miles, or 984,400 acres; divided into 2 hundreds, 575 parishes, and 30 market towns, viz. Ipswich, the county town, which sends 2 members to parliament, and gives the title of Viscount to the family of Fitzroy; Bury, which sends 2 members to parliament, and gives the title of Viscount to the family of Keppel; Sudbury, which sends 2 members to parliament, and gives the title of Baron to the family of Fitzroy; Orford, which gives the title of Earl to the family of Walpole; Brandon, which gives the title of Duke to the family of Hamilton; Eye, which sends 2 members to parliament, and gives the title of Baron to the family of Cornwallis; Ickworth, which gives the title of Baron to the family of Harvey; Alborough, which sends 2 members to parliament; Dunwich, which also sends 2 members to parliament; Clare, which gives the title of Duke to a branch of the Royal family; Leostoff, Woodbridge, Bilston, Southwold, Budefsdale, Bungay, Beccles, Hadley, Stowmarket, Debenham, Halefworth, Lavenham, Mendlesham, Mildenhall, Needham, Saxmundham, Woolpit, Neyland, Framlingham, and part of Haverill; among the villages, Ashfield gives the title of Baron to the family of Thurlow; Bolebrook, the same honour to the family of Germaine; Euston, that of Earl to the family of Fitzroy; Houghton, that of Baron to the Walpole family; and Suffield, the same dignity to the family of Harbord. The principal rivers are the Stour, Bret, Larke, Little Ouse, Orwell, Deben, Butley, Alde, Waveny, and Blyth. It produces corn, cattle, rye, hemp, salt; game in great plenty of all kinds, fish of every sort, timber, wood, &c. It has manufactories of bone-lace, woollen goods, fine and coarse, &c. and carries on an extensive commerce to Holland, Germany, Denmark, Sweden, Russia, Prussia, &c. It sends 16 members to parliament, 2 for the county, and 14 for the different boroughs, as above shewn; pays 20 parts of the land-tax, and provides 960 men to the national militia. On its coast are Leostoff Point, Easton Ness, Orford Ness, Burgh Castle, &c. with Sowl Bay, Mismere, Orford, Baudsey and Orwell Havens, with Alborough Harbour. The most noted places are Angill Hill, Slaughden Valley, several Woods, and Stour Meer.

The most remarkable Seats in this county are,

Acton Place, near Sudbury.
Ampton, near Bury St. Edmunds.
Ash Park, near Wickham Market.
Badmonesfield Hall, Lidgate.
Barton Hall, near Bury St. Edmunds.
Benacre Park.
Benhall Lodge, near Saxmundham.
Botefdale.
Great Boughton, Ipswich.
Boxted Hall, near Clare.
Bramford Hall, near Ipswich.
Branches Hall, near Cooling.
Brettenham Hall, near Sudbury.
Cavenham Hall, near Mildenhall.
Christchurch, near Ipswich.
Coldham Hall.
Crowfield Hall, near Needham.
Culford, near Bury St. Edmunds.
Dunston Hall.
Easton, near Wickham Market.
Euston, near Thetford.

Flixton Hall, near Bungay.
Gazeley, near Newmarket.
Glenham Parva, near Saxmundham.
St. Genove.
Helmington, near Debenham.
Hennave, near Bury St. Edmunds.
Herillam Park, near Southwold.
Hessel, near Woolpit.
Heveningham Hall, near Halefworth.
Hintlesham, near Ipswich.
Holbrook, near Ipswich.
Hoxne.
Ickworth, near Bury St. Edmunds.
Kentwell Hall, near Sudbury.
Loudhall Hall, near Wickham Market.
Melford Hall, near Sudbury.
Nafton, near Ipswich.
Oufden Hall, near Newmarket.
Polstead.
Red House, near Ipswich.
Rushbrook, near Bury St. Edmunds.

Great Saxham, near Bury St. Edmunds.
Shrubland Hall, near Needham.
Sibton.
Sotterly Hall.
Sproughton Chauntry, near Ipswich.
Stavender Park, near Orford.
Sudburn Hall, near Orford.
Thistow Hall.
Thorington Hall, near Halefworth.
Welnetham, near Bury St. Edmunds.
Zoxford.

The places most remarkable for beautiful and extensive Views are,

Wickham Steeple, S. of Framlingham.
Burstall, W. of Ipswich.
Stoke Neyland, S. E. of Sudbury.
From Ipswich to Harwich by Water.
The High Grounds in Stoke.

INTRODUCTION.

I HAVE rarely been more at a loss than in determining on what plan the report of provincial husbandry could be drawn up, so as best to answer the intention of the Board under whose auspices the present survey has been undertaken. But two circumstances tended to lessen the difficulty. First, The time allowed, which was incompatible with minute detail; and, secondly, the mode of printing with a broad margin, uniting to shew that such a sketch only was expected as might be a sort of syllabus for future annotations. Much, however, as this lessened anxiety, it did not altogether remove it. How far the experiments and observations of individuals should be recorded, was a question of difficulty. To bring forward, under the patronage of so respectable a public Board, the practices of those only who the surveyor preferred, and thought proper to visit in exclusion of a far greater number he either could not, or would not, attend to, would be to erect himself into a situation of more importance than he ought to be placed in, and would be a real injustice to those he omitted. This appeared to me to be a decisive reason for omitting all private and individual experiments, which, it should seem, ought rather to be brought forward in the future correspondence with the Board, when they might themselves be the judges of what was proper to accept and to notice; and if inadvertently they should be guilty of any injustice, it would wear a very different complexion from placing an individual in a situation that admitted it. These considerations have weighed sufficiently with me to draw up these papers in as

general terms as possible, and to avoid, with the utmost care, all appearance of assuming, in my own person, any discrimination of individual merit, in which it would be so easy (residing as I do in the country) to let private connections and views influence a public work.

Brevity is another object, the importance of which, in these inquiries, is perhaps of the first species of merit. When reports become numerous, should they prove voluminous also, the mass of materials would become so great as to render them with many nearly useless. As far as political arithmetic is concerned, general deductions and abstracts may be a satisfactory remedy; but never in cases of practical husbandry, where every attendant circumstance becomes a part of the main object, and inseparable from it, without danger of error.

SECT

SECT. I.

EXTENT.

BY the new map of Mr. Hodskinson, an oblong of almost unindented form may be measured, of 47 miles long by 27 broad. The land stretching beyond it, in the N. E. and N. W. parts, will more than fill the deficiency in the S. W. That form indicates a surface of 1269 square miles, or 812,160 acres. In Templeman's survey from old maps, he makes it 1236; but, as he computed by geographic miles, his estimation was confessedly erroneous, and of no other use than that of comparing one country with another. Suffolk, therefore, may be computed at about 800,000 acres.

SECT. II.

CLIMATE.

IT is unquestionably one of the driest climates in the kingdom; with which circumstance two others unite; the frosts are severe, and the N. E. winds, in the spring, sharp and prevalent. In these northern latitudes, and insular situations, the most humid countries are the most free from frost and snow, till you arrive on the western coasts of Ireland, where the rains are incessant, and frost unknown. Severe winters and dry springs have a strong influence on agriculture; the former render turnips a precarious dependence, and the latter lengthen the winter, to the great expence of the keepers of live-stock. On the whole, however, the climate of this county must be reckoned favourable.

B

SECT.

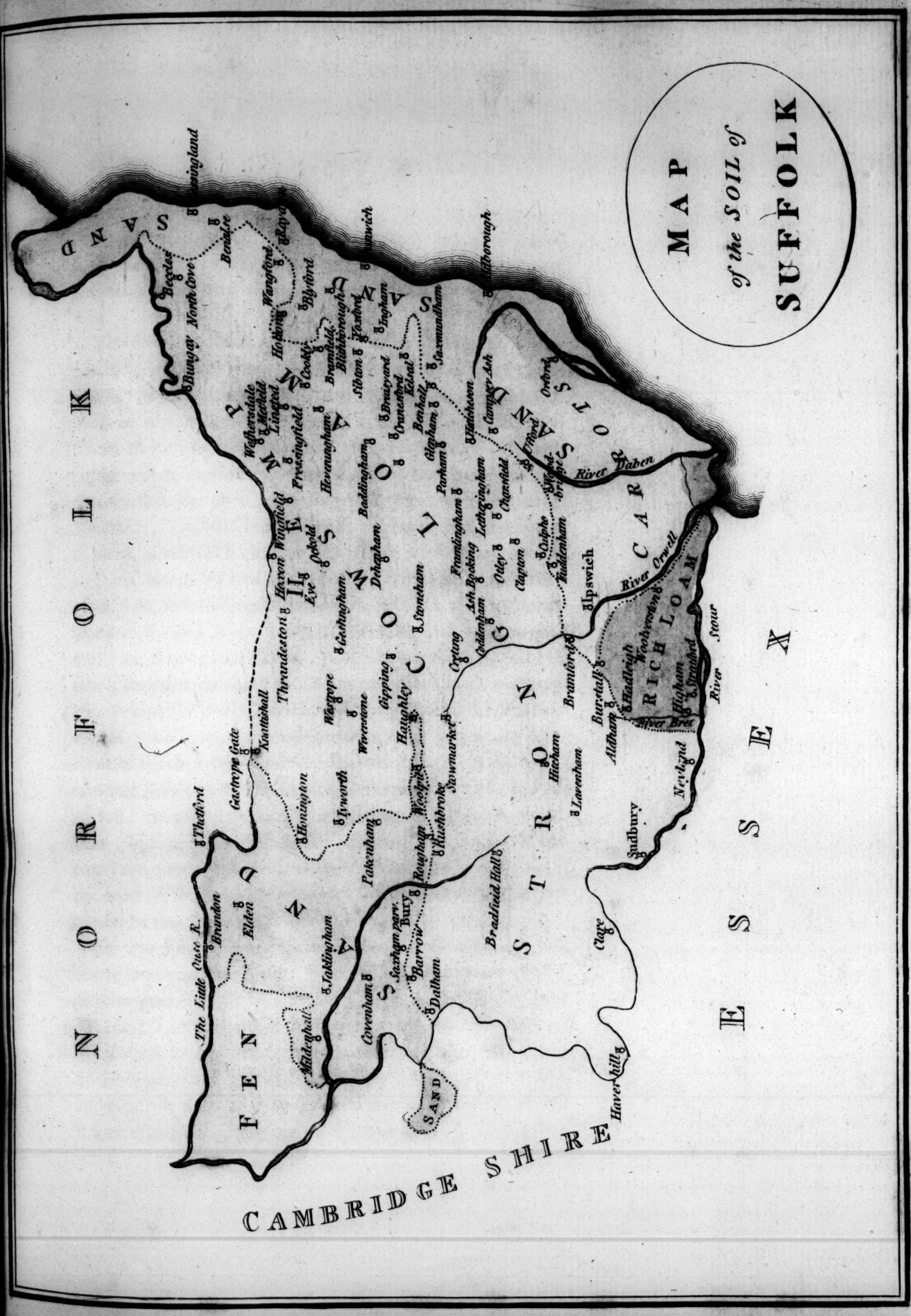


(10)

S E C T. III.

SOIL.

THERE is not, perhaps, a county in the kingdom which contains a greater diversity of soil, or more clearly discriminated. A strong loam, on a clay-marl bottom, predominates through the greatest part of the county, as may be seen by the map annexed; extending from the south-western extremity of Wratting Park, to North Cove, near Beccles. Its northern boundary stretches from Dalham, by Barrow, Little Saxham, near Bury, Rougham, Pakenham, Ixworth, Honington, Knattishall; and then in a line, near the river which parts Norfolk and Suffolk, to Beccles and North Cove; but every where leaving a slope and vale of rich friable loam adjoining the river, of various breadths. It then turns southward by Wrentham, Wangford, Blithford, Holton, Bramfield, Yoxford, Saxmuntam, Campsey, Ash, Woodbridge, Culpho, Bramford, Hadleigh; and following the high lands on the west side of the Bret, to the Stour, is bounded by the latter river, with every where a very rich tract of slope and vale from thence to its source. Such is the strong land district of Suffolk taken in the mass; but it is not to be supposed that it takes in so large an extent without any variation; a rule, to which I know few exceptions, is, that wherever there are rivers in it, the slopes hanging to the vales through which they run, and the bottoms themselves, are of a superior quality, and in general composed of rich friable loams; and this holds even with many very inconsiderable streams which fall into the larger rivers. The chief part of this district would in common conversation be called clay, but improperly. I have analysed many of these strong loams, and found them abounding with more sand than their texture would seem to imply; so that were they situated



MAP
of the SOIL of
SUFFOLK

Wade sculp. Strand.

situated upon a gravel, sand, or chalk, they would be called *sandy loams*; but being on a retentive clay-marl bottom, are properly, from their wetness, to be termed *strong* or *clayey loam*.

The district of rich loam being much less clearly discriminated, will leave more doubts on the minds of persons acquainted with it. From the river Deben, crossing the Orwell, in a line some miles broad, to the north of the river Stour, to Stratford and Higham, there is a vein of friable putrid vegetable mould, more inclined to sand than to clay, which is of extraordinary fertility: the best is at Walton, Trimley, and Felixtow, where, for depth and richness, much of it can scarcely be exceeded by any soils to be found in other parts of the county, and would rank high among the best in England. As the position recedes northward to the line from Ipswich to Hadleigh, it varies a good deal: in many places it approaches sand, and in some is much stronger, as about Wenham and Raydon: the general complexion, however, of the whole of Sampford hundred is that of good loam. I was much inclined to class the hundreds of Lothingland and Mutford, that is, all to the north of a line drawn from Beccles to Keffingland, in this division of soil; the rent of much would confirm such an arrangement; but on reconsidering the quality of the soil in various parts, and palpable sand so often intervening, especially along the coast, I think it, upon a general scale, safer to let it pass as part of the sandy maritime district.

Of that district I must observe, that my arrangement will startle many persons, who speak of *clay* in a loose and indefinite manner. I was told of large tracts of clay near Pakefield and Dunwich, and particularly on the farm of Westwood Lodge; but when I examined them I could not find a single acre: I found rich loamy firm sand worth 20s. an acre, but nothing that deserved even the epithet *strong*. I was assured that there was little or no sand in Colnefs

hundred, where I saw hundreds of acres of buck wheat stubbles. All these expressions result from the common ideas of soils being not sufficiently discriminated. Land of 15s. or 20s. an acre, in the eastern parts of the county, is never called sand, though deserving the epithet as much as inferior ones. The error has partly arisen from the title of *sandling* being given peculiarly to the country south of the line of Woodbridge and Orford, where a large extent of poor, and even blowing sands is found; but speaking with an attention to the real quality of the soil, and not at all regarding the rent, the whole of the maritime district may be termed sandy; towards the north, much inclining, in various parts, to loamy sands, and in others to sandy loams; but so broken, divided, and mixed with undoubted sands; that one term must be applied in a general view to the whole. This district I take to be one of the best cultivated in England; not exempt from faults and deficiencies, but having many features of unquestionably good management. It is also a most profitable one to farm in; and there are few districts in the county, if any, abounding with wealthier farmers, nor any that contains a greater proportion of occupying proprietors, possessing from one hundred to three and four hundred pounds a year.

The under stratum of this district varies considerably, but in general it may be considered as sand, chalk, or *crag*; in some parts marl and loam. The *crag* is a singular body of cockle and other shells, found in great masses in various parts of the country, from Dunwich, quite to the river Orwell, and even across it in Wolverston Park, &c. I have seen pits of it from which great quantities have been taken, to the depth of fifteen and twenty feet, for improving the heaths. It is both red and white, but generally red, and the shells so broken as to resemble sand. On lands long in tillage the use is discontinued, as it is found to make the sands blow more.

The

The western district of sand is a much poorer country, containing few spots of such rich sands as are found on the coast, but abounding largely with warrens and poor sheep-walks. A great deal under the plough *blows*, and consequently ranks among the worst of all soils, black sand on a yellow bottom perhaps excepted. Parts of the district take, however, the character of loamy sand; the whole angle, for instance, to the right of the line from Barrow to Honington, (see the map) in which no blowing, or even very light sand is found. A more striking exception, though of small extent, is found at Mildenhall, where there is an open field of arable land of capital value, dry yet highly fertile, and friable without being loose; its products almost perpetual, and its fruitfulness almost unvaried. The under stratum, through almost all the district, is a more or less perfect chalk, at various depths, but I believe uninterrupted; and it may be received as a rule, that the whole of it, low vales on rivers only excepted, is proper for sain-foine.

Of the fen district it is only necessary to observe, that the surface, from one foot to six, is the common peat of bogs, some of it black and solid enough to yield many ashes in burning; but in other places more loose, puffy, and reddish, and consequently of an inferior quality; the under stratum generally a white clay, or marl. Part of these fens is under water, though subject to a tax for the drainage, which has failed; but in Burnt Fen, by a late act of parliament for improving the banks, 14000 acres are completely drained, and under cultivation.

SECT. IV.

ESTATES.

THE state of property in Suffolk may be considered as beneficial in its division. The largest estate in the county is supposed not to exceed 8000 or 8500l. a year; and it is a singular instance of the rise in the value of land within the period of forty or fifty years. There are three other estates which rise above 5000l. a year; and I have a list of about thirty others which are about 3000l. a year and upwards. Under this there are numbers of all sizes; but the most interesting circumstance is of a different complexion, I mean the rich yeomenry, as they were once called, being very numerous, farmers occupying their own lands, of a value rising from 100l. to 400l. a year. A most valuable set of men, who, having the means and the most powerful inducements to good husbandry, carry agriculture to a high degree of perfection.

SECT. V.

TENURES.

THE great mass of the county is freehold property, but copyholds are numerous, and some of them large. Of college leases, scattered in various parts, nothing particular is to be noted.

Under this head, however, may be not improperly arranged some customs which are very great impediments to the due cultivation of the soil; these are the rights of commonage

and pasture, which exceed the ordinary cases.' At Troston, on the borders of the western sand district, I found open field lands in which the course is one crop to two fallows; and these consist in leaving the land to weeds for the flock of one farmer, who, by prescription, is the only person that can keep sheep in the parish! Nothing can be imagined more beggarly than the husbandry and crops on these lands; the same farmer has even the right of sheep-feeding many of the inclosed pastures and meadows after the hay is removed. In return for such privileges, he is bound to fold a certain number of acres for the other farmers. It is not difficult to trace the origin of such customs; but wherever found, they ought to be abolished, by giving an equivalent.

S E C T. VI.

FARMS.

THESE in Suffolk, must in a general light, be reckoned large; and to that circumstance, more, perhaps, than to any other, is to be attributed the good husbandry so commonly found in the county. In the district of strong wet loam, there are many small ones from 20*l.* to 100*l.* a year; but these are intermixed with others that rise from 150*l.* to 300*l.* and some even more. In the sand districts, they are much larger, many from 300*l.* to one of 850*l.* or 900*l.* that of West Wood Lodge near Dunwich, in the occupation of Mr. Howlett, and belonging to Sir John Blois, Bart. consisting of above 3000 acres, and is without exception the finest farm in the county. Agriculture is carried on to great perfection, through much of these sand districts, owing not a little to these large occupations in the hands of a wealthy tenantry. But this is a point

point that calls for an observation relative to the profit of cultivating different soils, which is, that there is no comparison between the wealth of our farmers on dry and on wet land. On the former, the occupation of a farm of 200*l.* or 300*l.* a year, has been throughout the county generally found attended with a very handsome profit, visible in various circumstances, and ascertained on the death of the farmers. But on the wet land, though numbers are very much at their ease, yet the advantages and fortunes made have been exceedingly inferior; and mixed with many instances that will not allow the idea of considerable profits. Conclusions may be drawn from this not unimportant: it should seem to mark what I have many years observed, that the management of light soils is vastly better understood than that of heavy ones; and it may possibly be found, that the latter are higher rented than the former. The fact is probably owing also to the arable land being, on wet soils, in too great proportion to the grass. These are circumstances much deserving the attention of landlords.

S E C T. VII.

RENT.

TO ascertain as nearly as possible the rent of land, in every county of the kingdom, is an object not only of political importance, but of great utility even in an agricultural view. In many cases, for want of other authorities, the produce of the soil cannot be calculated, but by means of the fair rent of it; and it is unnecessary to explain the variety of lights, in which a knowledge of the gross produce is of material consequence, being in truth the greatest and most solid foundation of the national wealth and power. There is, however, some delicacy

delicacy necessary in treating, under the authority of a public board, a subject which has been apt to excite jealousies, as if it were possible that ascertaining rent was one step to the possible imposition of certain taxes. The idea seems to me unfounded: Government has such a variety of methods of acquiring knowledge of that nature, that she could derive very little assistance from any possible enquiries made through the medium of a Board of Agriculture. And it might further be observed, in all questions of taxation, ascertaining the national amount of any object is of far less importance, than deciding upon the principles and effect of the imposition, which must ever determine such questions; and by no means the fact of a rental being 20 or 24 millions, or any other sum to be supposed. In an agricultural light, a knowledge of the rent is an essential article, for there are low rents paid by certain modes of management, with more difficulty to the tenant than would attend much higher ones, under a change of conduct. Such a difference is a very strong argument, applicable equally to both landlord and tenant.

To ascertain the rent of the several districts is impossible; nothing more is to be expected than to guess, with some degree of approximation to the truth. On the foundation of as correct information as I could, from residence and examination, procure; I am inclined to believe, that the several soils are at present rented as under, the whole country included, sheep-walk, waste, commons, &c. which are very large deductions from the rate of the cultivated land.

	£.	s.	d.
The strong or wet loam, at per acre,	-	-	0 13 0
The rich loam,	-	-	0 14 0
The maritime district of sand,	-	-	0 10 0
The western do. of do.	-	-	0 5 0
The fens,	-	-	0 2 6

It should be noted, that there are in all these districts, except the fen, tracts that let at 20s. and 25s. and even higher rents,

rents, and meadows higher still; but the rents here minuted are those of the whole county, as viewed in the map.

GENERAL VIEW OF THE RENTAL OF THE COUNTY.

Dividing the county according to the soil in the annexed map, and weighing each division accurately, I find the proportions are, to the total of 800,000 acres, as under; to which I have added the rent and totals.

ACRES.	£.	s.	d.
30,000 fen, at 2s. 6d. - - -	3750	0	0
46,666 $\frac{2}{3}$ rich loam, at 14s. - - -	32,666	13	4
156,666 $\frac{2}{3}$ sand, at 10s. - - -	78,333	3	4
113,333 $\frac{1}{3}$ do. at 5s. - - -	28,333	6	8
453,333 $\frac{1}{3}$ strong loam, at 13s. - - -	294,666	13	4
800,000 average rents, 10s. 6d.	£. 437,749	16	8

SECT. VIII.

WASTE LANDS.

IF there is one object more important than another in the examination of the agriculture of a province, with a view to the improvements that are practicable in it, it certainly is this of wastes. No person, who has reflected seriously on the state of the soil of England, but must be well convinced that there want few instigations to cultivate wastes, but the power to do it, without those very expensive applications to parliament, which are at present necessary even for the smallest objects.

jects. If the Board of Agriculture be able to accomplish this desideratum, it will merit greatly; and the national interests find themselves advanced in a degree which no other event whatever could secure. The magnitude and importance of this design cannot be understood, without discovering the extent of these wastes, which will, without doubt, be effected by means of the surveys going on in every part of the kingdom.

I have calculated from much information, of different kinds; and from comparing and combining various data, conclude that there are in Suffolk wastes to the amount of nearly, perhaps quite 100,000 acres, or $\frac{1}{8}$ th part of the whole; comprehended under the terms sheep-walk, common, warren, &c.

It is, however, to be noted, that none of these are, strictly speaking, absolutely *waste*, if by that term is understood land yielding nothing: I include all lands uncultivated, which would admit of a very great improvement, not always profitably to the tenant, who may, on a small capital, make a great interest per cent. by a warren, for instance, but in every case to the public.

Commons fed bare, may seem to yield a considerable produce, but there is often a great deception in it; the cattle and sheep should be followed through the winter, and whenever it is found, that there is no adequate winter provision, so often the case with poor men's stock, there are large deductions to be made from the apparent produce of the summer.

S E C T. IX.

HUSBANDRY.

THE management of the arable land, in the four distinct soils, is essentially different, and merits a description as particular as can be given in the short compass of such a sketch as this.

STRONG LOAM ON A CLAY-MARL BOTTOM.

Common exertions in common practice diverge into such endless variations, that to note the methods pursued by individuals, would fill a volume. In a work of this nature, which must be considered but as a sketch of the subjects to be treated more particularly by those whose situation enables them locally to give the authority denied to others, it is only practicable to seize the most prominent features, such as best discriminate the system pursued.

In the strong soils of Suffolk, the course of crops, into whatever variations it may usually be thrown, includes summer-fallow as the common preparation for the rotation of corn products; the old system, very general, about forty or fifty years ago, was the uniform husbandry of unenlightened Europe.

The fallow to prepare for wheat; the wheat succeeded by oats or barley; and that again by the return of fallow. This husbandry is still found even in inclosed lands. But, generally speaking, it is changed for one of two other courses,
either

either to make the fallow still the preparation for wheat, or to change that crop for barley. In one case it is thus :

1. Fallow,
2. Wheat,
3. Barley,
4. Clover,
5. Wheat;

or the same principle governing many variations. This principle is, that a fallow once given will enable the farmer to omit it the second return, and even the third also, by means of clover, tares, pease, &c. Thus improving a little upon the old true system of a dead fallow every third year.

The other method is a later improvement ; to change the principle of relying on a year's tillage as the preparative for wheat, and substituting clover. Thus,

1. Fallow,
2. Barley,
3. Clover,
4. Wheat,

which, for lands (if such there be) that really demand fallowing, is a correct mode, and seldom practised except by very good farmers. Others, not of equal intelligence, continue it by the addition of a crop of barley or oats after the wheat ; or by sowing clover with that crop, taking pease after the clover, and wheat after the pease.

The note of these courses is sufficient to give the general idea of common practice on this soil. Variations cannot be attended to : a notable one is, planting cabbages instead of fallow : but, as that will be mentioned elsewhere, I omit it here.

RICH LOAM.

On this soil the management is more uniform. The rotation, called the Norfolk husbandry, is very generally introduced, which is making turnips the preparation for barley, and clover that for wheat, in the course of,

1. Turnips,
2. Barley,
3. Clover,
4. Wheat,

which is certainly one of the best systems that ever was invented, and, indeed, altogether unexceptionable. There are two common variations, but both for the worse; to take a second crop of barley or oats after the wheat, and then recommence: the other, to sow clover with that second barley, and then wheat again on that clover: this is very bad, for it fouls the land.

SAND.

On the sand districts the management varies proportionably with the badness of the soil; but in one feature it is universal, that turnips are every where the preparation, the basis for both corn and grass. There is no sand so light that it will not yield, by means of dung or fold, this crop.

After turnips, barley is generally sown; then grass seeds succeed, but with variations. On bad sands trefoile and ray grass are chosen, because their duration equals the views of the farmer: they are left commonly three or four years, and when broken up, a *bastard* fallow given for rye. The discrimination between good and bad farmers, in this arrangement,

ment, depends entirely on this point; good ones consider every thing as subservient to sheep, consequently leave their grasses as long as possible; but bad ones, in a hurry for corn, and an immediate advantage, plough too soon. All these sandy districts are invariably sheep farms (rabbits only excepted) the flocks feed in winter on turnips, and in summer on these *layers*.

Buckwheat forms in some very poor spots a variation; and small pieces of tares and pease are sometimes seen; but the system I have described holds good in general.

FEN.

The course of crops generally pursued in this district is to sow cole seed on one ploughing, after paring and burning; which is for sheep-feed or seed, according to circumstances; then oats twice in succession; with the last of which crops they lay down with ray grass and clover, for six or seven years, and then pare and burn, and repeat the same husbandry.

Such are the courses of crops which are usually practised in the four predominant soils of Suffolk; and I should remark, that they are found indiscriminately on the fields of men who have worked no improvements, and those by whom considerable ones have been effected.

SECT. X.

OPERATIONS OF TILLAGE.

Ploughing. IN every part of the county this is done with a pair of horses, conducted with reins by the ploughman; and

and the quantity of land usually turned in a day is an acre upon stiff soils, and from one and a quarter to one and a half on sands. The Norfolk wheel plough, and the little light swing plough of Suffolk, are the common implements. The latter is a good tool for depths not exceeding four inches, but a better construction is wanted for greater depths.

A very ingenious blacksmith, of the name of Brand, who has been dead some years, improved the Suffolk swing plough, and constructed it of iron. I have been informed, that the copse, in its present state, was an improvement of his; if so it is much to his credit, for there is no other in the kingdom equal to it.

Oxen are used by a few individuals, but no where common.

The form of laying arable lands upon dry soils, is, on the flat, with finishing furrows; alternate gathering and splitting; but on wet lands, the three foot Essex ridge of two *bouts* is most common. In some districts, six, eight, and ten feet *steatches*, a little arched, are used.

Rolling and Harrowing. In general, there is nothing in the practice which demands particular attention; but I found in the hemp district a management in working clover lays for wheat, which ought to be noted. A heavy roller follows the ploughs, then a spike roller. This prepares well, especially in a dry season.

Dibbling Wheat. This practice, which there is every reason to denominate excellent, is well established in the county, and increases every year. In the maritime sand district, many thousand acres are thus put in. One farmer near Dunwich, the year before last, dibbled 258 acres, and this year above 250, that is, his whole crop; and many others apply the same method for their whole wheat crop. The ground being rolled with a light barley roller, a man, walking

walking backwards on the *flag*, as the furrow slice is called, with a dibber of iron, the handle about three feet long, in each hand, strikes two rows of holes, about four inches from one row to the other, on each flag; and he is followed by three or four children, to drop the grains, three, four, or five in each hole. In this way, from six to seven pecks of seed are deposited, at very equal depths, in the center of the flag. A bush harrow follows to cover it; the expence eight to nine shillings an acre. There are several circumstances which tend to render this method superior to the common. The treading so equally, is very beneficial upon light soil; and in dry weather hurtful upon none. The seed is laid in at an equal and good depth; and it is all in the flag itself, and not dropt in the seams, where weeds, if any, will arise: and there is some saving in seed. The fact is, that the crops are superior to the common, and the sowing more equal. It is not common to hoe, except only one row is put in instead of two. Some use a frame which strikes many holes at a time; but the work is not so well done, and I found the practice not equally approved. The vast system of well paid employment for the poor, which this practice carries with it, is a point of immense importance. I heard of families who had received, father, mother, and children, among them, two guineas a week, for six weeks.

Drilling is practised with great intelligence and success, by individuals, in several parts of the county; but no where has the least tendency to become the common practice. In some districts it declines; and while dibbling spreads rapidly, this practice moves with difficulty. The kinds of drills are various; Mr. Cook's variations of Mr. Ridge's, and a new one, which promises to be an improvement on all, and which was invented by Mr. Stanton of Weybread, is now made by Mr. Brock, a mill-wright at Harlstone.

SECT. XI.

GRASS LAND.

THE management of meadows and upland pastures, in this county, in general, can scarcely be worse. Upon the same farms, where almost every effort is made upon the arable, the grass is nearly or quite neglected. A little draining is sometimes, though rarely, bestowed. Manuring is unknown in the hands of tenants; and as to mole and ant hills, bushes, and other rubbish, immense tracts of what is called grass, are over-run with them. Rolling is seldom given. Things wear rather a better aspect upon farms occupied by the owners; but, speaking generally, I allude principally to tenants. As to lands in the hands of gentlemen, they are managed, in many cases, in a much superior stile, but not always.

Whatever is expended upon arable land, the tenant can, in the course of a lease, get back again. Upon grass this is not the case: he may make as large a profit; but still he will leave something at the end of a term for the landlord. If this idea be not the cause of the ill management noted, I know not what is. But the conduct ought to be a lesson to landlords, never to allow grass-lands to be broken up: instead of which, it has been common, in various parts of the county, to let great tracts be broken up, to the unquestionable damage of the farms.

S E C T. XII.

IMPROVEMENTS.

THESE in Suffolk are important, and will offer to the eye of an attentive traveller much subject of instruction. They are,

1. On strong loam—hollow draining.
2. On sand—claying.
3. On fen-land—paring and burning.

The other soil, the rich loam, wants no other amelioration than what good management yields in its ordinary routine.

HOLLOW DRAINING.

This most excellent practice is general on all the wet lands of the county : it is too well known to need a particular description. I shall only observe, therefore, that the distance between the drain is usually from $5\frac{1}{2}$ to 8 yards; the common depth is 24 inches, from 20 to 26; the breadth at top, just wide enough to admit a man to work in, and at bottom, as narrow as possible, not more than two inches. The materials used for filling, bushes covered with straw, sometimes straw or stubble only; and the expence, if with bushes, amounts, on an average, every thing included, to two guineas, or forty-five shillings an acre, the men being paid three shillings a score rods for the work. The duration varies, according to the goodness of the work and materials, from 12 to 25 years; and some filled with straw only have been known to last much longer. It will not be improper to hint, that there are two errors very common in the performance of this improvement. The first is, making the drains in, or nearly in, the direction of the declivity; whereas they ought

always to be made obliquely across it. The other is, that of marking out, and making numerous drains across the sides of springy hills, which might, in many cases, be drained completely with a single drain, judiciously disposed, according to those obvious principles upon which the celebrated drainer, Mr. Elkington of Leicestershire, proceeds.

No improvement can have greater or more immediate effects than this of draining; none that pays the farmer with more certainty. Its importance is perfectly well understood, and the practice general.

About twenty years ago, a Mr. Makins, of this county, invented a plough for cutting these drains, which was rewarded by the Society of Arts; but, on various attentive trials, it was found to work at a greater expence than the spade, and has long since been totally laid aside.

CLAYING.

A term in Suffolk which includes marling; and indeed, the earth, carried under this term, is very generally a clay marl; though a pure, or nearly a pure clay, is preferred for very loose sands.

The extent to which this improvement has been carried, in both the sand districts, is very considerable, there being few farmers of any note, on very light land, that have not carried large quantities. An excellent cultivator near Bury, though not on a very large farm, has carried 140,000 loads. The operation of this manure, acting both chemically and mechanically, is so obvious on very light soils, that it wants no explanation. But when the *clay* is not of a good sort, that is, when there is really none, or scarcely any clay in it, but is an imperfect, and even a hard chalk, there are great doubts how far it answers, and, in many cases, has certainly been spread to little or no profit. The quantity usual is from 60

to 80, and sometimes 100 loads an acre, the load containing about 32 bushels. The men are paid from 27s. to 30s. *per* 120, for filling and spreading, earning 10s. or 11s. a week; and the expence of teams is about as much more. When this manuring is done, therefore, on very poor land, the expence is equal to the value of the fee-simple of the estate. The duration, and indeed the whole effect, depends much on the course of crop pursued. If the plough is too freely used, and corn sown too often, it answers badly, and the effect is soon lost; but, with good management, it lasts 20 years. Where the management is good, and the clay well adapted to the land, the profit is very great. In many cases, a course of fallow and rye, or *light* oats, is converted to fine barley, clover, and wheat, and the produce of the soil multiplied twenty-fold; but, on the contrary, the cases, in which the return has been inadequate, are not a few. And I believe it will be found, that, on soils that will yield fain-foine, it is more profitable to cultivate that grass, than to clay the land for corn.

In a part of the maritime sand districts called *the Sandlings*, which are south of Woodbridge, Orford, and Saxmundham, they formerly made a very great improvement, by spreading shell marl on the black ling heaths, with which all that tract was once covered. But as the marl, called there crag, is all dry powdered shells, like running sand, without any principle of adhesion, the effect was good only once; for, after cultivating those heaths, on trying the crag a second time, it was found to do little or no good; and in some instances even to make the sand *blow* the more. It seems, therefore, to have acted in this respect like lime, which has been frequently found to have great effect on the first application, upon lands long in a state of nature; but on repetition that effect has been found to be lost.

In the carrying on of clay, or marl, they have made, of late years, in the maritime district, especially about Blithford and
Dunwich,

Dunwich, one great improvement, which is substituting the one-horse three-wheel cart for the common large tumbril. Thirty of these small carts have been at work in a single field, while the great tumbrils were all left idle at home; having been found, on careful trial much inferior to them. A sketch of this nature does not admit the detail of economical management; but new and important features it may be right just to touch on.

PARING AND BURNING.

This husbandry, which, properly managed, is the most admirable of all improvements, and improperly, the most mischievous, is known only in the small angle of Fen. In that district they could not cultivate without this capital assistant. It is scarcely possible, profitably, to bring boggy, moory, peat soils, from a state of nature into cultivation, without the assistance of fire, which is the most effective destruction of the spontaneous growth, and never fails, but because the men employed do not pare deep enough. In these fens the original surface is rough and unequal, from great tufts of rushes, &c. called there *haffocks*. Some persons cut them with spades, at the expence of five to ten shillings an acre; others with the plough. Paths for the horses were, in that case, to be cut by hand, and the plough made on purpose, and called a haffock plough, cut laterally much beyond the line of its draught. But opinions are, in general, that hand work is the cheaper: in either case the haffocks are dried, heaped burnt, and the ashes spread. After this they go over it again with a very complete and effective tool, called a fen-paring plough, the furrow of which is burnt. Coleseed is then sown on one shallow ploughing; never harrowed, in order not to disturb the whole furrow, but rolled, or lightly bush harrowed. This coleseed is either for a crop of seed or
for sheep

for sheep food; in the latter sells for a guinea an acre; in the former, two or three guineas. Oats are then sown; the crop productive; and the land, if well laid down to grass, becomes good meadow. But the management in this respect is very bad, for they sow only clover and ray grass; and after six or seven years, pare and burn again; instead of which, if proper seeds were sown, the land would be ever after in an improving state.

Whatever objections have been made to the husbandry of paring and burning, have either been the result of theoretical reasonings on false principles; or else founded on facts, furnished by very bad farmers. The common-conduct is to make this operation the preparation for successive corn crops, and perhaps in a bad rotation. If a dunghill were given to a bad farmer, and it was used on similar principles, it would almost equally exhaust the soil; yet who has found out that dunging land is bad husbandry? Paring and burning gives a dunghill also; it is bad management alone that converts it into an evil. Make it the preparation for grass, and all is safe.

It is very rare to find such instances of sudden improvements as have been made in Burnt Fen. Forty years ago 500 acres were let for a guinea a year; but in 1772 an act was obtained for its separate drainage, and 1s. 6d. an acre levied for the expence of the embankment, mills, &c. In 1777, the bank broke; and most of the proprietors ruined. In 1782, on the success of the machine called *the Bear*, in cleansing the bottoms of the rivers, and other reasons, occasioned some persons to purchase in this neglected tract. The banks were better made, mills erected, and the success great. Servants of the former proprietors bought lots for 200l. with almost newly erected buildings on them, that cost 3, 4, and 500l. Such lots now let at 100l. per annum. An estate of Mr. Jones, bought of ——— Chitham, Esq.

for 200*l.* would now sell at 2000*l.* A Mr. Cash bought 800 acres for 25*l.* he since sold half of it to Edward Gwilt, Esq. of Icklingham, for 100*l.* the other half he sold for 300*l.* which has been resold for 800*l.*; and Mr. Gwilt could now sell his for 1600*l.* Three farms sold for 600*l.* would now let for 300*l.* a year. Mr. Foote of Brandon, in 1780, bought 390 acres for 150*l.* a considerable part of which is now let at 10*s.* an acre. All these improvements have been very much owing to paring and burning.

S E C T. XIII.

OF LIVE STOCK.

THIS object is perhaps the most important in the whole range of rural œconomies. The poorest and most backward nations contrive to raise bread for their consumption, equal to the demand; and to increase the quantity with the increase of their mouths. Their wheat, in the most miserable husbandry, is nearly equal, and much of it superior, to that of our highly cultivated fields; and we feel constantly in our markets the effect of their competition; but with all that concerns live stock, the case is abundantly different; it is by great exertions only, that a people can be well supplied, and for want of such exertions, many nations are forced to content themselves with such meat as others would not touch. Look at a sample of French and Swiss wheat, no difference is found; but examine the cows of Swisserland and of Lorraine, what a difference! Compare the mares of Flanders with the ponies of Bretagne, the sheep of England and of France; nay, let us come nearer home, and reflect on the

wool.

wool is in contemplation, examine the fleeces of Segovia and of Italy, in the same parallel of latitude.

Next to the cultivation of waste lands (which by the way much depends on the well ordering of live stock) this is the greatest desideratum in the agriculture of Britain. The sheep, cows, hogs, and horses of Suffolk, demand attention.

I. SHEEP.

The Norfolk breed of sheep spread over almost every part of the county; and as the most famous flocks are about Bury, ----much more celebrated than any in Norfolk---it has been observed, that they ought rather to be called the Suffolk breed. This race is so well known, that it would be useless to give a particular description of them; it is, however, proper here, to note their principal excellencies and defects. Among the former is the quality of the mutton; it being admitted at Smithfield, that as long as cool weather lasts, it has, for the table of the curious, no superior in texture or grain, flavour, quantity, and colour of gravy, with fat enough for such tables. In tallow, they reckon no sheep better. In fattening, at an early age, they are superior to many breeds, though said to be not equal to some others. The wool is fine, being in price, per lb. the third sort in England. Their activity in bearing hard driving, for the fold, is much spoken of. In hardiness and success, as nurses, they are also much esteemed in this county. Such are their excellencies; the defects with which they are reproached, are, a voracity of stomach, which demands more food, in proportion to their weight, than some other breeds; and the consequent circumstances of being necessarily kept very thin on the ground: a want of that disposition to fatten, which keeps stock in great order on middling, and extraordinarily fat on good food: both circumstances, resulting from an ill-

F

formed

formed carcass; a ridged back; large bones; a thin chine; and heavy offals: a restless and unquiet disposition, which makes them difficult to keep in any other than the largest walks, commons, or fields; a texture of flesh that will not keep in hot weather, so long as that of South Down, and consequently said to be inferior in price at that season; a loose ragged habit of wool, losing if not in high keep.

These ill qualities have so much foundation in facts, that other breeds are introducing rapidly into both Suffolk and Norfolk, and promise speedily to be well established. It is proper to observe, that of all these objections to the Norfolk breed, there is none more notorious, or more susceptible of direct proof, than the number kept on a given quantity of ground; which, in these two counties, is fewer than is kept on similar land of some other breeds. This is an object of importance; whatever merit or advantage is attained by keeping 500 sheep on a farm of 750 acres, sinks much, if 750 of some other breeds might be kept on the same land. The first and greatest of the national interests, as well as the profit of the individual, is intimately concerned in such a position.

In the management of their flocks, our farmers have no point so interesting, as the almost entire reliance for the winter support on turnips. In some counties, large flocks are kept without turnips: here they have not an idea of the possibility of such a conduct. The late Mr. Macro, and the present Duke of Grafton, have given most particular and accurate details of their respective flocks; * and the former allows 80 acres of turnips for 36 score ewes; besides 20 acres of winter tares, 20 acres of rye, and 16 tons of hay. The latter, for 47 score of ewes, 100 acres of turnips, 50 of rye, 22 tons of hay; and I find that it may be taken

* Annals, vol. 2. p. 427. vol. 7. p. 1.

taken as a common allowance, 100 acres of turnips for a flock of 30 score of ewes, which makes 6 to an acre. But this breadth will not be sufficient, without some assistance from hay, and also from rye; the quantity of both these vary much. It depends also on the breadth of sheep walk; and whether such walk is well stocked with ling or furz, and kept back in summer, in order for yielding the more food in time of snow and frost. If these preparatives are compared with those of most other counties, it will be found, that our Suffolk flock-masters allow, with great liberality, for the winter season, and are at an immense expence to meet it. Whether this does not partly arise, from the breed they are so fond of demanding great *keep*, deserves enquiry.

This most ample provision of turnips is, however, attended with one very great inconvenience; which is, the excessive distress that results from such a severity of weather as rots that crop; the loss of 100 acres, or even half of it, in the provision for 30 score ewes, can only be made up by a dreadful expence in hay; which, in such severe winters, is usually at a price much beyond its average value. I have known flock-masters buy hay for their sheep, at the rate of 5*l.* a day, for weeks together. Such accidents ought certainly to induce them to vary their provision more, by substituting cabbages, kale, cole-seed, &c. in lieu of a part of their turnip crop.

But, the provision, of all others, the most important, because the cheapest and most effective, is *rouen*, as it is called in Suffolk, that is, the after-grass of the mowing ground. The value, fed in autumn, rarely exceeds 10*s.* or 12*s.* an acre; but kept till the spring for ewes and lambs, is worth from 20*s.* to 30*s.* an acre.

For the summer food of sheep our flock-masters depend altogether on what is called the sheep walk (a piece of waste land) and the *layers*, artificial grasses, clover, trefoile and ray,

which are regularly sown in their course of crops, and which are often double the quantity of the turnips.

Folding is universally and anxiously practised, as the manure upon which the corn principally depends: the value of it is reckoned from one shilling and six-pence to one shilling and eight-pence a head of the flock.

The other circumstances proper to note are, that the rams are turned into the flock about a fortnight after Michaelmas, sometimes later: and in doing this, ten or twelve will be let in promiscuously among 600 ewes, without the least attention or idea of separating the sixty best ewes to put to the best ram, in order that some part of the flock might be improving: on the contrary, the worst ewes may, in the common method, have the best ram; and the best ewes the worst ram. With such conduct, a farmer has good luck, if his flock is not in a state of degradation. The lambs are born pretty well woolled. They are weaned immediately preceding Ipswich fair, (August 22,) perhaps a month too late; nor is it uncommon to see the lambs, drawing the ewes to skeletons, the middle of August, with clover over the hedge in full blossom, *kept for seed*, instead of weaning the lambs in it.

The following *system* is the common *flock* management. The wether lambs fold; and the refuse ewe lambs, after drawing off that number to keep, which supplies the place of the *crones*, fold. The return, lamb and wool. Wether lambs of the best flocks, sell at from 14s. to 15s. in good times; ewes 10s. to 11s. but the average of all their lambs at Ipswich fair, in a common year, does not exceed 10s. 6d. The price of flock wool, for seven years, from 1778 to 1784, was 11. 2s. 6d. the tod of 28lb. It kept rising till 1789, when it was 29s. in 1790, 32s. in 1791, 35s. and in 1792, 40s. Some flocks sold higher than these prices, but others were lower. It is a point of considerable consequence, to ascertain what is the annual *return* of a sheep in all the breeds of England; for many curious and important questions, relating not only to the

the breeds of sheep, but also to the comparison of grass and arable, and of different rotations of crops, depend on it.--- Mr. Macro's flock returned him 11s. and 3d. a head per annum for his whole flock of ewes. Prices have risen since; so that I am inclined to think, that *large* Norfolk sheep like his, which ranked among the finest flocks we had, may be calculated to pay in lamb, wool, and fold, 13s. a head, which will make just three-pence a week for the year round: but this must not be considered as the average of Suffolk flocks, but beyond it, for great numbers of lambs are sold at Ipswich, Horrenger, Harling, Coolege, and Newmarket fairs, from 6s. to 10s. each. It is probable, that all the sheep in the county, do not pay more than 10s a head; at least, this is the opinion of various practical farmers, who know the county well. And that it is a matter of serious national concern, to have so great a number of sheep, kept in a country so well adapted to that animal, for so small a return, will, I believe, be admitted by every one.

There is no other sheep system on a scale large enough to demand particular notice. In the richer parts of the county, most farmers keep a few of a changeable flock, bought and sold every year, either wether lambs kept a year, or a year and half, and sold to the butcher; or *crones* bought in autumn; the lambs sold fat early in summer, and the sheep at the Michaelmas following. Where this is done, it is not common to find them in greater numbers than in the proportion of five acres to a sheep, that is, 20 upon a farm of 100 acres. In all such cases, and speaking not of particular instances, but on a general average, if the farmer doubles his money within the year, he thinks himself pretty well paid; if he returns $2\frac{1}{2}$ for one, he is well paid; but good managers will sometimes treble their money. All such points, however, depend for their merit on the number kept.

Much might easily be added on the subject of shepherds, shearing, mode of folding, distempers, and other interesting objects:

objects: but I am giving not a dissertation on sheep, but the sketch of a county, and wish to confine myself to those points which are somewhat local and appropriated.

2. COWS.

The cows of Suffolk have long been celebrated for the great quantity of their milk, which I believe much exceeds, on an average, that of any other breed in the island, if quantity of food and size of the animal are taken into the account.

The country which is more peculiarly, but not exclusively, the seat of the dairies, is marked out by the parishes of Codenham, Ashbocking, Otley, Charlfield, Letheringham, Hatcheston, Parham, Framlingham, Cransford, Bruisyard, Baddingham, Sibton, Heveningham, Cookly, Linstead, Metfield, Wetherdale, Fressingfield, Wingfield, Hoxne, Broome, Thrandeston, Gessingham, Tenningham, Westrop, Wyverston, Gipping, Stonham, Creeting; and again to Codenham, with all the places within being or tract of country of 20 miles by 12. The limits cannot be exact, for this breed of cows spreads over the whole county; but this space must be more peculiarly considered as their head quarters.

The breed is universally *polled*, that is, without horns; the size small; few rise, when fattened, to above 50 stone, (14 lb.) The points admired are, a clean throat, with little dewlap; a snake head; clean thin legs, and short; a springing rib and large carcass; a flat loin, the hip bones to lie square and even; the tail to rise high from the rump. This is the description of some considerable dairy-men. But if I was to describe the points of certain individuals, which were very famous for their quantity of milk, it would vary in several points; and these would be such as are applicable to great numbers. A clean throat, with little dewlap; a thin
clean

clean snake head; thin legs; a very large carcass; ribs tolerably springing from the center of the back, but with a heavy belly; back-bone ridged; chine thin and hollow; loin narrow; udder large, loose, and creased when empty; milk-veins remarkably large, and rising in knotted puffs to the eye. This is so general, that I scarcely ever saw amongst them a famous milker that did not possess this point. A general habit of leanness, hip bones high and ill-covered, and scarcely any part of the carcass so formed and covered as to please an eye that is accustomed to fat beasts of the finer breeds. But something of a contradiction to this, in appearance, is, that many of these beasts fatten remarkably well, the flesh of a fine quality; and in that state will *feel* well enough to satisfy the touch of skilful butchers. The best milkers I have known have been either red, brindle, or yellowish cream-coloured.

The quantity of milk given is very considerable indeed. There is hardly a dairy of any consideration in the district, that does not contain cows, which give, in the height of the season, that is, in the beginning of June, eight gallons of milk in the day; and six are common among many for a large part of the season. For two or three months a whole dairy will give, for all that give milk at all, five gallons a day on an average, if the season is not unfavourable, which, *for cows of this size*, is very considerable. When the quantity of milk in any breed is very great, that of butter is rarely equal. It is thus in Suffolk; the quantity of milk is more extraordinary than that of the butter. The average of all the dairies of the district may be estimated at three firkins and three-fourths of a whey of cheese *per* cow, clear to the factor's hands, after supplying the consumption of the family. The hogs are very generally laid at a guinea *per* cow, and a calf, at a fortnight old, half-a-guinea.

3 firkins

	L.	S.	D.
3 firkins, at 38s. average price of last seven			
years, - - - - -	5	14	0
$\frac{3}{4}$ whey, at 36s. - - - - -	1	7	0
Hogs, - - - - -	1	1	0
Calf, - - - - -	0	10	6
	£	8	12 6

About 2s. or 3s. may be deducted from this on account of the calves reared to keep up the stock; and if something more is struck off on account of a few ill-managed dairies, that do not properly come into the account, it may reduce it to eight guineas. Instances are numerous that raise it higher. The cows of a farm at Aspal have paid more than once 8l. *per* cow, when butter and cheese were at 32s. Another of 9 cows produced 31 firkins. The butter and cheese of a farm of 90l. a year, let nearly at its value, produced (price at 32s.) 140l. and there are 40 acres under the plough. A farm of 185l. a year, that has near 100 acres of arable, produced 121 firkins of butter, and 65 wheys of cheese. In another instance, 20 cows made 80 firkins, besides cheese; and another, in which the cows made 4 firkins of butter each, but no cheese. The common calculation is, that a cow in milk eats in summer two acres of grass; and that on an average of twenty miles by twelve, there is one cow to every five acres of the whole country.

In regard to the expences, the dairy-maid earns to the full amount of her wages, by spinning hemp or wool; and as she is fed pretty much from the dairy, the charge is very small. Interest of the capital invested in the cow is 7s. 6d. or 8s. as much more for losses. Fuel, and wear and tear, add something. Hay is from one-half to three-fourths of a ton *per* cow; or, as they calculate by expence to the farmer, and not value in the market, 15s. The profit left much exceeds what

what any other application of the soil would yield, which, though good for cows, is not rich enough for fattening oxen beneficially.

In feeding these cows, the most singular circumstance is, the use of cabbages, an article of culture which gradually established itself within about twenty-five years past, each farmer usually having a small field merely for the use of his cows; and turnips are cultivated on a small scale for the same purpose. Opinions are much divided concerning the profit of the practice. Carting off these crops on such wet land is very prejudicial to the succeeding corn; consequently, those who make corn the first object, do not approve them; but the more intelligent men, who consider the dairy as the principal point to attend to, approve cabbages.* The value of an acre rises from 4*l.* to 7*l.* In respect to their utility for cows, there is but one opinion. Every one agrees, that cabbages and straw are by far better food for milch cows than any quantity of hay; and a circumstance that proved the goodness of the food for butter, was, the veal carts, which go regularly from this district to London, taking large quantities of butter, which was sold and eaten as hay-butter, as long as cabbages remain sound; but, when they rot, there is an end of this laudable deceit, as no management can do the same thing with turnips.

Another circumstance in the management of their cows deserving notice, is, that of tying them up in the fields, without house, or shed, or roof to cover them. With rails and stakes they form a rough manger; and the cows are tied to posts about three feet from each: at their heads is a screen of faggots. Litter is regularly given, and the dung piled up in a wall behind. They find this better than letting them range at will, for cows before calving; and that the shelter of the

F

hedge

* This question is fully examined in *Annals of Agriculture*, vol. 5. p. 196.

hedge and dung, and the warmth of their bodies, are enough without any cover.

The greatest fault to be found with their management is, the carelessness with which they breed. There is no such thing in the country as a bull more than three years old; two years the common age. The consequence of this is inevitably, that, before the merit can be known of the stock gotten, the bull is no more. It must be obvious, that such a system, precludes all improvements. It springs very much from the want of the spirit of breeding getting into this country; but, this cannot originate here, while the price of a bull is 4l. or 5l. If a very attentive breeder was to arise, who bred merely for quantity of milk, and procured a breed better than any of his neighbours, and could attain the price of a guinea for covering a cow, something would gradually be done; for this purpose, there should be premiums given, or some other method taken, to excite a spirit of emulation.*

3. HORSES.

The Suffolk breed of horses, is no less celebrated than the cows. They are found in most perfection, in the district of country that is upon the coast, extending to Woodbridge, Debenham, Eye, and Loestoff. The best of all were found some years ago upon the *Sandlings* south of Woodbridge and Orford. Amongst the great farmers in that country, there was, forty years ago, a considerable spirit of breeding, and of drawing team against team for large sums of money. Mr. Mays of Ramsholt-dock was said to have drawn fifteen horses for 1500 guineas. It is to be regretted, that such a spirit of emulation was lost. I remember seeing many of the old breed, which were very famous, and, in some respects, an uglier horse could not be viewed; forrel colour;

* The quantity of butter, supposed to be sent from Suffolk to London, annually, is about 40,000 firkins.

lour; very low in the fore-end; a large ill-shaped head, with flouching heavy ears; a great carcass and short legs; but short-backed, and more of the *punch* than the Leicestershire breeders will allow. These horses could only walk and draw; they could trot no better than a cow. But their power in drawing was very considerable. Of late years, by aiming at coach horses, the breed is much changed to a handsomer, lighter, and more active horse. It is yet an excellent breed; and if the comparison with others, and especially the great black horse of the midland counties, be fairly made, I have no doubt of their beating them in useful draft, that of the cart and the plough. But the fair comparison is this: let a given sum be invested in the purchase of each breed; and then, by means of which, will a thousand tons of earth be moved to a given distance by the smallest quantity of hay and oats? It is the oats and hay that are to be compared, not the number or size of the cattle. The present price of these horses is high; good geldings, of five or six years old, selling at thirty to forty guineas. A spirited and attentive breeder, upon a farm of 1000 or 1500 acres of various soils, that would admit two or three stallions, and thirty or forty capital mares, might, by breeding in and in, with close attention to the improvements wanted, advance this breed to a very high perfection, and render it a national object: but then, query, whether the same expence and attention would not produce a breed of cattle that would, by training, supercede the use of horses? Of all the branches of live stock, perhaps nothing is in such an imperfect state as working oxen; in every thing that concerns them, we are really in the infancy of agriculture.

4. HOGS.

Of the hogs of Suffolk I shall only observe, that the short white breed of the Cow district has very great merit; well

made, thick short noses, small bone, and light offals; but not quite so prolific as some worse made breeds.

5. RABBITS.

There are many warrens in Suffolk, especially in the western sand district; but within the twenty last years, great tracts of them had been ploughed up, and converted to the much better use of yielding corn, mutton, and wool. From this circumstance, has arisen the great increase of the price of these furs. Thirty years ago, the skins were at five shillings a dozen; they gradually rose to twelve shillings; but, since the commencement of the present war, have fallen to seven shillings, which may be considered as an event favourable to agriculture; for improvements will, without question, be the consequence. It is very difficult to gain a satisfactory knowledge of the acreable produce of land, in this application of the soil; for the warrens are more commonly estimated than measured. There is one near Brandon, which is said to return above forty thousand rabbits in a year. Estimating the skin at seven pence, and the flesh at three pence, (in the country it sells at four pence, and five pence), it makes ten pence a head; and if ten are killed annually, per acre, the produce is eight shillings and four pence; which may not be far from the fact, on some soils; but variations are very considerable. The expences are lessened, since faggots, which the rabbits peel, have been partly substituted in lieu of much of the hay, which was once thought necessary for them in snows.

S E C T. XIV.

OF SUNDRY ARTICLES OF CULTIVATION.

CARROTS.

THE culture of carrots in the *Sandlings*, or district within the line formed by Woodbridge, Saxmundham, and Orford, but extending to Leiston, is one of the most interesting objects to be met with in the agriculture of Britain. It appears from Norden's Surveyors Dialogue, that carrots were commonly cultivated in this district two hundred years ago, which is a remarkable fact, and shews how extremely local such practices long remain, and what ages are necessary thoroughly to spread them. For many years, (generally till about six or seven past) the principal object in the cultivation, was sending the carrots to London market by sea: but other parts of the kingdom having rivalled them in this supply, they have of late years been cultivated chiefly for feeding horses; and thus they now ascertain, by the common husbandry of a large district, that it will answer well to raise carrots for the mere object of the teams.

Not to enter particularly into a cultivation, which I have already described in the Annals of Agriculture, I shall only note here, that the most approved method is, to leave a barley stubble (which followed turnips) through the winter, and about Ladyday, to plough it by a double furrow as deep as may be, and to harrow in 5 lb. of seed *per* acre. About Whitsuntide they hoe for the first time, thrice in all, at the expence of 18s. an acre. The produce on good land, of 10s. to 15s. an acre, 400 to 500 bushels, but sometimes 800 are gained; on poorer soils, less; even to 200 bushels. They are left in the field during winter, and taken up as wanted; by which

which means, in severe winters, they suffer by the roots rotting, unless well covered by snow. In feeding, they give about eighty bushels a week to six horses, with plenty of chaff, but no corn; and, thus fed, they eat very little hay. Some farmers, as the carrots are not so good at Christmas as in the spring, give forty bushels, and four of oats, a week, in the fore part of the winter; but in the spring eighty, and no corn. By long experience they find, that horses are never in such condition as on carrots, and will, on such food, go through all the work of the season better than on any other in common use; fed only with corn and hay, even with a great allowance, they would not be in near such order. If oats and carrots are given at the same time, they leave the oats, and eat the carrots; but for horses that are rode fast, they are not equally proper. They begin to use them before Christmas, and continue it sometimes till Whitsuntide, those used in the latter part of the season being taken up and housed, to have the land clear for sowing barley.

There is scarcely an article of cultivation in any county of England, that more demands attention than this of carrots in Suffolk, for it is applicable to all sands, and dry friable sandy loams, of which immense tracts are found all over the kingdom, but this application of them unknown.

CABBAGES.

The culture of cabbages, the use of which for cows I have already mentioned, is another article which adds not inconsiderably to the agricultural merit of Suffolk. The most approved method is, to sow the seed in a very rich bed, early in the spring; to prepare the land by four ploughings, the last of which buries an ample dunging, and forms the land a second time on three-feet ridges, along the crown of which the plants are set in a rainy season, about Midsummer. They are kept clean by horse and hand-hoing. The produce

rises to above thirty tons *per acre*. A gentleman near Bury carried this husbandry very near to perfection, and on so large a scale as to seventy acres in a year; but he sowed more than half the seed in August, and pricked out at Michaelmas; planting in the field the first heavy rains in May: his crops always great, and their use in fattening oxen distinguished.

HOPS.

At Stowmarket and its vicinity, there are about 200 acres of hops, which deserve mention as an article which is not generally spread through the kingdom. The average produce, 6 cwt. at 5*l.* or 30*l.* *per acre*, and expence in labour only 7*l.*

WOODS.

The woods of Suffolk hardly deserve mentioning, except for the fact, that they pay in general but indifferently. By cuttings at ten, eleven, or twelve years growth, the return of various woods, in different parts of the county, have not, on an average, exceeded 9*s.* *per acre per annum*; the addition to which sum, by the timber growing in them, but rarely answers sufficiently to make up for the difference between that produce, and the rent of the adjoining lands. There cannot be a fact more clearly ascertained, than that of every sort of wood being at a price too low, to pay with a proper profit for its production; and nothing but the expence and trouble of grubbing, prevents large tracts of land, thus occupied, from being applied much more beneficially.

HEMP.

HEMP.

The district of country, in which this article of cultivation is chiefly found, extends from Eye to Beccles, spreading to the breadth of about ten miles, which oblong of country may be considered as its head quarters.

It is in the hands of both farmers and cottagers; but it is very rare to see more than five or six acres in the occupation of any one man. With cottagers, the more common method is, to sow it every year on the same land: there is a piece at Hoxne which has been under this crop for seventy successive years. The soil preferred, is, what is called in that district, *mixed land*, that is, sandy loam, moist and putrid, but without being stiff or tenacious; in one word, the best land the country contains, and does well, as may be supposed, on old meadow and low bottoms near rivers. They manure for it with great attention; so that it may be taken as a maxim, that hemp is not often sown without this preparation: of dung and moulds, twenty-five three-horse loads per acre; of dung alone, sixteen loads. This is done directly after wheat sowing is finished.

The tillage consists in three earths, with harrowing sufficient to make the soil perfectly fine; and it is laid flat, with as few furrows as possible.

Time of sowing, from the middle to the end of April; but will bear being sown all May. It is often found, that the early sown yields hemp of the best quality.

Quantity of seed, eleven pecks per acre, at the price of one shilling to two shillings a peck, generally from sixteen to eighteen pence. Much is brought from Downham, and the fens; the seeded hemp is not so good by eighteen pence or two shillings the stone.

No weeding is ever given to it, the hemp destroying every other plant.

It is pulled thirteen or fourteen weeks after fowing; the wetter the season the longer it stands; and it bears a dry year better than a wet one: make no distinction in pulling, between the male and female; or fimble and seed hemp, as denominated in some places. In the Cambridgeshire fens they are frequently separated, which may arise from their hemp being coarser, and the stalk larger. The price of pulling is one shilling a peck of the seed sown, or eleven pence an acre, and beer; but if it comes in harvest the expence is higher. It is tied up in small bundles called *baits*.

It is always water *retted*; clay pits preferred to any running water, and cleaned out once in seven or eight years. An acre of three small waggon loads are laid in one *bed*. They will water five times in the same hole; but it is thought by some too much. If necessary to wait, they pull as the hole is ready, not chusing to leave it on the land after pulled.

It is generally four days in the water, if the weather is warm, if not five; but they examine and judge by feeling it. The expence is twelve to fifteen shillings an acre.

The grassing requires about five weeks; and if there are showers, constantly turned thrice a week; if not, twice a week. This is always on grass land or layers. It is done by women; the expence ten shillings an acre. It is then tied up in large bundles of eight or ten *baits*, and carted home to a barn or house to break directly.

Breaking is done by the stone, at one shilling. There are many people in the district who do it, and earn fifteen or sixteen pence a day, and beer. The offal is called hemp *sheaves*, makes good fuel, and sells at two pence a stone.

It is then marketable, and sold by sample at Difs, Harling, Bungay, &c. price 5s. 6d. to 8s. a stone; generally 7s. 6d. This year it will be 10s.

The buyer heckles it, which is done at 1s. 6d. a stone; he makes it into two or three sorts: *long strike*, *short strike*, and *pull tow*. Women buy it and spin it into yarn, which they

carry to market, and sell at prices proportioned to the fineness. This the weaver buys, who converts it into cloth, which is sold at market also. The spinners earn better and more steady wages than by wool: a common hand will do two flkins a day, three of which are a clue, at nine pence; consequently she earns six pence a day; and will look to her family and do half a clue. Nor is the trade, like wool, subject to great depressions, there being always more work than hands; the consequence of a brisk demand. They begin to spin at four or five years old: it is not so difficult to spin hemp as wool; but best to learn with the *rock*. For very fine yarn one shilling a clue is paid for spinning. About Hoxne, the yarn is half whitened before weaving; but in other places, weave it brown, which is reckoned better. The weavers of fine cloth earn 16s. or 18s. a week, middling 10s.*

The fabrics wrought in this country from their own hemp have great merit. They make it to 3s. 6d. and 4s. 6d. a yard, yard wide, for shirts: and I was shewn sheets and table linen, now quite good, after twenty years wear. Huckabacks, for table linen, 13d. to 7s. a yard, ell wide.

The produce of an acre may, on an average, be reckoned forty-five stones, at 7s. 6d. Some crops rise to fifty-five, and even more; and there are bad ones so low as twenty-five. If sold on the ground as it stands, generally 1s. a rod, or 8l. an acre.

The account of an acre may be thus estimated:

EXPENCES.

* Many interesting circumstances relating to hemp, in Suffolk, may be found in *Annals of Agriculture*, vol. 10, p. 377.

EXPENCES.

Rent, tythe, and rates,	-	-	-	£ 1 10 0
Manure, twenty-five loads, at 1s. 6d.	-	-	-	1 17 6
Three earths, at 4d. harrow included,	-	-	-	0 12 0
Seed,	-	-	-	0 16 6
Sowing,	-	-	-	0 0 6
Pulling,	-	-	-	0 12 10
Watering,	-	-	-	0 12 0
Graffing,	-	-	-	0 10 0
Breaking,	-	-	-	2 12 6
Carriage and delivery,	-	-	-	0 5 0
				£ 9 8 10

PRODUCE.

Forty-five acres at 7s. 6d.	-	-	-	£ 16 17 6
Expences,	-	-	-	9 8 10
Profit,	-	-	-	£ 7 8 8

All accounts of this sort must be received with due allowances for many variations. The preceding was taken at Hoxne; but, at Beccles (where, however, the quantity cultivated is not equally great) a very different mode of calculation takes place, and rent is *valued*.

EXPENCE.

Rent, tythe, and rates,	-	-	-	£ 4 0 0
Manure,	-	-	-	3 0 0
Carry over,	-	-	-	£ 7 0 0

Brought over,	-	-	-	-	£7 0 0
Tillage,	-	-	-	-	1 4 0
Seed, twelve pecks,	-	-	-	-	1 16 0
Pulling,	-	-	-	-	0 19 0
Watering,	-	-	-	-	0 12 0
Graffing,	-	-	-	-	0 10 0
Breaking,	-	-	-	-	2 10 0
					£14 11 0

PRODUCE.

Fifty stone, at 8s.	-	-	-	-	£20 0 0
Expences,	-	-	-	-	14 11 0
Profit,	-	-	-	-	£5 9 0

The common method is to sow turnips on the land immediately after the hemp is cleared: this is for producing, among the little occupiers, some food for a cow and the family. With good management, one ploughing and one hoeing will carry them to the value of 30s. But an evil arising from the practice is, that the land must for the next crop be mucked in the spring, when carting does more damage. When corn is sown after the hemp, it is wheat; and these are the best crops in the country, as nothing is esteemed to clean land like this plant. After the wheat, barley or oats, and this great also.

Finding the profit so great, I demanded why the culture did not increase rapidly? I was answered, that its coming in the midst of harvest was embarrassing, and that the attention it demanded in every stage of its progress was great; being liable to be spoiled if the utmost care was not perpetual.

It is considered, and with great justice, throughout the district, to be of infinite consequence to the country; and especially to the poor, who are entirely supported by it, and are now earning six pence a day by spinning, with more ease than three pence is gained on the other side the county by wool.

The culture has increased considerably in the last ten years.

S E C T. XV.

INCLOSING.

HAD the time allotted by the Board allowed it, I would have carefully examined every parish in the county that has been inclosed by act of parliament. To gain the necessary intelligence by correspondence is not easily done, as I have found; but when the sketch, which these papers contain, is sent to individuals, not with my authority, but the more respectable application of the Board itself, they may be induced to communicate the circumstances desired. I shall insert here one case, which will shew what is most wanted.

PARISH OF CONEY WESTON IN SUFFOLK,

Contains about 1200 acres; the rent about 800*l*. Inclosed in 1777, by act of parliament.

RE.

REGISTER.

	Births.	Burials.		Births.	Burials.
1761,	6	6	1778,	4	3
2,	4	0	9,	3	3
3,	1	6	80,	6	5
4,	2	4	1,	5	5
5,	3	3	2,	4	6
6,	6	2	3,	5	3
7,	3	2	4,	4	0
8,	3	1	5,	7	5
9,	2	4	6,	6	4
70,	8	3	7,	9	1
1,	0	1	8,	3	3
2,	4	2	9,	13	4
3,	4	5	90,	6	4
4,	3	3	1,	6	4
5,	3	2	2,	8	4
6,	6	2	3, †	10	2
	---	---		---	---
	58	46		99	56
	46			56	
	---	---		---	---
	12 Increase.			43 Increase.	

Rents doubled since the inclosure; and the farmers at the same time far richer than before.

Poor-rates 1s. 3d. in the pound, rack rent.

21 houses, poor-house included.

36 families, containing 212 souls.

SECT.

† Year ending June 3, at the Generals.

SECT. XVI.

I M P L E M E N T S.

WAGGONS are universal in the county, the modern and greatest of all improvements, that of substituting one horse carts or cars, being, generally speaking, unknown; the usual load is ten quarters of wheat to four horses, on turnpikes; and five on by-roads.

Carts are much too heavy and ill-constructed, they usually contain from 36 to 40 bushels, and are drawn by three, four, or five horses, according to weight of load.

Horse rake. This is common: it is drawn by one horse, for clearing spring corn stubbles, instead of the corn dew rake drawn by a man. It is a very good tool; but to substitute the sickle, and bind in sheaves, is a much superior practice.

The Drill Roller. This tool, invented in Norfolk, gains ground in Suffolk. Its object is to save the expence of dibbling, by making little channels, $4\frac{1}{2}$ inches asunder, across a clover lay after ploughing; the wheat seed is then sown broad cast, and is covered by a bush harrow. For light soils, that require pressure, it is a very good implement, but inferior to dibbling. Another use, to which it is applicable, is that of pulverizing a fallow on stiff lands in a dry season, in which it is uncomparably effective, more so than any spike roller I have seen.

SECT. XVII.

LABOUR.

THE variations in the price of labour in the county, are not considerable: it may be stated generally (beer included) at 1s. 4d. in winter, 1s. 6d. in summer, and 2s. 10d. in harvest. Call winter twenty-nine weeks, harvest five, and summer eighteen; this will make the year's earnings, 23l. 18s. A woman earns 6d. and the wages of men servants rise from 5l. to 10l.

These are prices by the day; but the great mass of work in this county is done by the *piece*, in which earnings are usually much higher. At clay cart, which goes on through winter, the earnings are pretty generally 10s. a week; and but little work is taken, at that season, for less than 9s. In summer, the rates are higher. In regard to the rise in labour, it is considerable. In my own vicinity, I remember it to have risen in 20 to 25 years, from 1s. in winter, to 1s. 4d. a day; and in harvest from 10s. to 12s. and of late to 14s. a week. There are parts of the county, where the rise has not been equally great.

SECT. XVIII.

PROVISIONS.

THROUGHOUT the county, the average of mutton, beef, and veal, to take no *weighing* meat, on contract for the whole

whole year, may be stated at 5*d.* per pound. But mutton usually $\frac{1}{2}$ *d.* per lb. dearer than beef; and the coarse joints of the latter, bought *in the afternoon*, may be had in general by poor house-keepers, at 2*d.* or $2\frac{1}{2}$ *d.* the lb. Pork $5\frac{1}{2}$ *d.* Butter---salt, $8\frac{1}{2}$ *d.* 9*d.* and $9\frac{1}{4}$ *d.*; fresh, 10*d.* and to 1*s.* at scarce seasons. Cheese, 5*d.* but Suffolk, $3\frac{1}{2}$ *d.* and 4*d.* The price of all these is risen considerably in 20 years. Bread, $1\frac{1}{2}$ *d.* and not risen.

SECT. XIX.

OF THE PRINCIPAL IMPROVEMENTS YET WANTING IN THE COUNTY.

AS well cultivated as Suffolk undoubtedly is, yet are there several points in which the management of her farmers might receive great and essential improvement. These principally consist in,

1. Irrigation.
2. Burning.
3. In the general management of grass land.
4. In sheep walks.
5. In rejecting fallows.
6. In live stock.

I. IRRIGATION.

Of all the improvements wanting in this county, there is not one so obvious, and of such importance, as watering meadows. The rivers, streams, and brooks, in every part, are numerous; few countries are better watered with small streams; yet is there not a well-watered meadow in the
H county:

county: at least, not one to my knowledge. Some individuals have been so struck with the benefit of partial flooding by accident, that they have thrown water over meadows; but never have done it in a manner to be highly beneficial, and usually without any attention to take it off again. But of all improvements, this is perhaps the most unquestionable and important. To view large tracts of poor and unproductive arable land, below those levels in which water might be made to flow, is a spectacle that wounds every feeling of a man that looks about him with the eye of an irrigator; and yet this horrid sight is to be found almost in every parish of the county, at least in the vicinity of every stream, and in lands kept in the hands of gentlemen who call themselves farmers, and are really fond of husbandry. It would be idle to enter at large into the means of effecting this improvement. It is understood and practised, in great perfection, in many of our counties, and men to perform the operation, easy to be had.

2. BURNING.

The application of fire is as useful and effective to land as that of water. There are in Suffolk many thousands of acres of poor, wet, cold, hungry pastures and neglected meadows, over-run and filled with all sorts of rubbish, and abounding with too few good plants to render their improvement easy without breaking up: all such should be pared and burnt; not to keep under the plough to be exhausted and ruined, which is infallible, and the land left in a worse state, beyond all comparison, than it was before; but to be laid *immediately* to grass, that is, as soon as the course of husbandry necessary will admit. This ought to be without variation, under any pretence whatever, in this course of crops. 1. Pare and burn for turnips, which fed on the land by sheep. 2. Oats; and with these oats the grass feeds sown.

The oats and the turnips would more than pay all the expence of a previous hollow draining, should that be necessary, of the paring and burning, and every other charge; and the change, from a very bad pasture to a very fine one, would all be neat profit. The tenant would be greatly benefitted, and the landlord would find his estate improved, if let, as farms ought to be let, with an absolute exclusion of felling a lock of hay under any pretence whatever.

The dry rough sheep walks covered with ling, furz, broom, &c. should also be broken up in the same manner; but universally to be laid down again with the grasses suitable to the soil and to sheep. On weak thin stapled land, two crops of corn, after paring and burning, would be pernicious. *Perhaps* they might be well laid down without a single one, which would be so much the better.

3. GRASS LAND.

The arable lands of the county are so much better managed than the grass, that an improvement in the latter would be attended with great private and national advantage. Our sister county of Norfolk is, if possible, yet worse in this respect. Clearing away of bushes, and other rubbish, is not commonly done; mole and ant hills rarely cut; drains made only in arable fields; and as to manuring, I have very seldom seen any laid upon grass land *rented*. The reason of this general neglect results not from inattention, but an erroneous calculation. In the farmer's estimate, and he is right, there will be a considerable benefit remaining to the landlord at the end of a lease, from all improvements of grass land; whereas upon arable there may not be one penny left from the expenditure of a pound. This is true, but the conclusion, that what the landlord gains is at the expence of the tenant, is a very great error; both may gain greatly, but

not at the expence of each other. One reason why improvements of grafs are fo rarely feen, and alfo why moft tenants would, if their landlords allowed it, plough up every acre of grafs on their farms, results, in fome meafure, from their making no fair experiments of the value, which is not to be done in ordinary rough land, except by fheep only. If they would lock into fuch a field a certain lot of fheep, fuppose two, two and a half, or three to an acre, and keep them there the whole year, registering the hay given in deep fnows, and on no account folding thofe fheep on other lands, (as in that cafe no improvement results from fheep-feeding) they would find the return of fuch lands not contemptible; and if they continued the trial for a few years, they would fee fuch lands constantly improving; fo that the more fheep were kept, the more might be kept in future. Thefe are experiments very eafily made with a quiet breed, and there are not many more important ones.

4. SHEEP-WALKS.

I have already mentioned the profit of paring and burning thefe: at prefent I would only obferve, that many farmers think thefe defart wafes neceffary for their flocks, which is a moft egregious error. They are undoubtedly very ufeul; and, if they were converted to corn, the number of fheep kept upon a farm would decline; but good grafs adapted to the foil would be abundantly more productive for the flock. Whoever has viewed the immense wafes that fill almoft the whole country from Newmarket to Thetford, and to Gaf-trop-gate, and which are found between Woodbridge and Orford, and thence, one way, to Saxmundham, not to mention the numerous heaths that are fcattered every where, muft be convinced, that their improvement *for grafs* would enable the county to carry many thoufands of fheep more than it does at prefent.

5. FALLOWS.

5. FALLOWS.

There is no question at all of the merit of fallowing, when compared with bad courses of crops. If the husbandry is not correct in this respect, the fallowist will certainly be a much better farmer than his neighbours: but there are courses which will clean the foulest land as well as any summer-fallow, by means of plants, which admit all the tillage of a summer-fallow. Cabbages are not planted before June or July: winter tares admit three months tillage, if tillage is wanted. Beans well cultivated will preserve land clean, which has been cleaned by cabbages. And, in any case, two successive hoeing-crops are effective in giving positive cleanliness. These observations are not theory, they are practice; and it is high time that mankind should be well persuaded that the right quantity of cattle and sheep cannot be kept on a farm, if the fallows of the old system are not made to contribute to their support.

6. LIVE STOCK.

The cows and horses of the county are already so good, that the only attention they want is that of selection for the purpose of breeding in and in. A skilful attentive occupier of a large farm, who carried these breeds to the perfection they admit of, would find his account greatly in it, and raise the prices of these stock high enough to excite the competition, without which nothing can be perfected.

But, in the case of sheep, the point is very different. With them, a foreign cross is necessary; as much so for the profit of the farmer as for the interest of the nation. The Norfolk breed certainly have merit; but merit, purchased at the expence of keeping only half a fair stock, becomes something very different from merit. The South Down and
Bakewell's.

Bakewell's breed are introduced, and will, without doubt, make their way.

SECT. XX.

STATISTICAL DIVISION OF THE PRODUCE OF LAND IN SUFFOLK.

I HAVE often reflected on the most simple method of bringing into the shortest compass possible, a view of the gross produce of the soil diffusing itself through the variety of classes most nearly concerned in the culture, receipt, and consumption of the earth's products. What may be called, without impropriety, political agriculture, depends altogether on this division being clearly understood. Volumes have been written diffusely upon the subject, and have perhaps failed in utility in proportion to their bulk : but if tables, on a plain and simple plan, could be constructed, which would present the leading facts in a clear view, the road to this branch of knowledge, so unquestionably important, would be greatly shortened. Enquiries, however, of this nature must be long pursued, and by many persons, before any thing near perfection is to be attained. I present the following sketch to the Board, as an attempt which may in time be ameliorated, in more able hands, into a general view of the kingdom, which shall contain, in a very small space, abundance of useful information.

SUFFOLK RICH LOAM.

STATISTICAL DIVISION OF THE PRODUCE OF AN ACRE
OF WELL MANAGED ARABLE LAND.

Rent 15s.

Farmer's capital 5l. per acre.

Course of crops:

1. Turnips,
2. Barley,
3. Clover,
4. Wheat.

GROSS PRODUCE.

	L.	s.	d.
1. Turnips, keeping $6\frac{1}{4}$ sheep 26 weeks, at 3d. }	2	0	0
2. Barley, 4 qrs. at 21s.* - - -	4	4	0
3. Clover, 7 sheep 26 weeks, at 3d. - - -	2	5	6
4. Wheat, 3 qrs. at 42s.† - - -	6	6	0

Divide by 4 years, £14 15 6

Per ann. - £3 13 10

THE ABOVE DIVIDED AMONG

The landlord,	-	£0	12	0	net rent,
The state,	-	0	2	6	land tax,
Artizans,	-	0	0	6	repairs,
		0	15	0	gross rent.
Industrious poor,	-	1	1	0	labour,
Indigent poor,	-	0	3	6	poor rates,
Artizans and fundries,	-	0	0	6	other rates,
Artizans,	-	0	2	0	wear and tear,
Carry over,	-	£2	2	0	

* For the price of wheat and barley in Suffolk, see Annals of Agriculture
vol. 15. p. 83.

† Ibid.

Brought over,	2	2	0	
The church,	-	-	0	4 0 tythe,
The farm,	-	-	0	7 0 feed,
Ditto,	-	-	0	10 0
				} team of 4 horses, at 12l. 10s. od. per 100 acres.
The farmer,	-	-	0	10 10
				£3 13 10

Produce, - - - - - £3 13 10

DEDUCT

Seed,	-	-	-	0	7	0	}	
Team,	-	-	-	0	10	0		
Half wear and tear,	-	-	-	0	1	0		
Five-sixths of labour,	-	-	-	0	17	6		
Three-fourths of poor rates,	-	-	-	0	2	6		
								1 18 0

For market, - - - - - £1 15 10

In order to form such a table as this, it is necessary to simplify the business, more than it admits in every case, in fact. The clover is supposed to be the food of sheep alone; but in common practice, the horses, hogs, cows, and, in general, all the stock of a farm consume it; but for the great objects of such an enquiry, to substitute sheep, does not affect the principles of the calculation.

To discover what portion of the produce comes free to market, is always an enquiry of considerable importance; for if the subject was thoroughly analyzed, it would probably be found, that that system of rural oeconomy, whether respecting the size of farms or the conduct of the soil, would be found politically best, which sent the largest *surplus* to market. In order to discover what this is, deductions should be

be made of that portion of the produce consumed by the necessary neighbours of the farmer in the village, including a very large portion of the labour, a smaller proportion of poor rates, and a still smaller one of the wear and tear. All the seed, and (but not with positive accuracy) the team. The farmer's personal consumption should also be deducted; but this is more difficult to estimate. When the consumption of these several classes is deducted, the remainder forms that portion of the produce which may be said to go *free* to market, and forms the great basis which supports towns and manufactures.

STRONG LOAM.

STATISTICAL DIVISION OF THE PRODUCE OF AN ACRE OF ARABLE LAND IN COMMON MANAGEMENT.

Rent 15s.

Farmer's capital 5l. an acre.

Course of crops:

1. Fallow dunged for,
2. Wheat,
3. Barley,
4. Clover,
5. Wheat.

GROSS PRODUCE.

	L.	S.	D.
2. Wheat, 3 qrs. at 42s. - - -	6	6	0
3. Barley, 3½ qrs. at 21s. - - -	3	13	6
4. Clover, 6 sheep 26 weeks, at 3d. -	1	19	6
5. Wheat, 2½ qrs. at 42s. - - -	5	15	6

Divide by 5 years, £17 14 6

Per ann. - £3 10 10

THE ABOVE DIVIDED AMONG

The landlord,	-	£0	12	0	net rent,
The state,	-	0	2	6	land tax,
Artizans,	-	0	0	6	repairs.
		0	15	0	gross rent.
Industrious poor,	-	0	18	0	labour,
Indigent poor,	-	0	3	6	poor rates,
Artizans and fundries,	-	0	0	6	other rates,
Artizans,	-	0	2	0	wear and tear,
The church,	-	0	4	0	tythe,
The farm,	-	0	8	3	feed,
Ditto,	-	0	12	0	team,
The farmer,	-	0	7	7	
£3. 10 10					

Produce, - - - - £3 10 10

DEDUCT AS BEFORE,

Seed, team, five-sixths labour, three-fourths poor rates, and one-half wear and tear,	}	1 18 10

For market,	-	-	-	£1 12 0

This table explains the circumstance to which I have already adverted, the profit of cultivating dry soils on comparison with wet ones; and it shews, that while fallows are retained, neither the produce for the public, nor the profit for the farmer, can be carried to the height they are capable of.

If, instead of this fallow course, a different one be substituted, such as, 1. cabbages; 2. oats; 3. clover; 4. beans; 5. wheat; the produce and advantage would probably be found to become greater.

SAND.

STATISTICAL DIVISION OF THE PRODUCE OF AN ACRE
OF POOR ARABLE.

Rent 5s.

Farmer's capital 3l. 10s. an acre.

Course of crops:

1. Turnips,
2. Barley,
3. and 4. Trefoil and ray,
5. Ditto, and bastard fallow.
6. Rye.

GROSS PRODUCE.

	L.	S.	D.
1. Turnips, 4 sheep 24 weeks, at 3d. -	1	4	0
2. Barley, 2½ qrs. at 21s. - - -	2	12	6
3. Clover, 3 sheep 26 weeks, at 3d. -	0	19	6
4. Ditto, 2 ditto ditto, - - -	0	13	0
5. Ditto, 2 ditto, 12 ditto ditto, -	0	6	0
6. Rye, 1½ qr. at 11s. - - -	1	13	0

Divide by 6 years, £7 8 0

Per ann. - £1 4 8

THE ABOVE DIVIDED AMONG

The landlord,	-	£0	4	4	net rent,
The state,	-	0	0	6	land tax,
Artizans,	-	0	0	2	repairs.
		0	5	0	gross rent.
Industrious poor,	-	0	4	0	labour,
Indigent poor,	-	0	0	10	poor rates,
Artizans, and fundries,		0	0	2	other rates,
Artizans,	-	0	0	9	wear and tear,
The church,	-	0	1	0	tythe,
The farm,	-	0	2	6	feed,
Ditto,	-	0	2	0	team,
The farmer,	-	0	8	5	
		£1	4	8	

Produce, - - - - £1 4 8

DEDUCT AS BEFORE,

Seed, team, proportion of labour, rates, } 0 8 10
and wear and tear, }

For market, - - - £0 15 10

It is proper to explain here, and the observation is applicable to all these estimates, that the proportion assigned to the farmer concerns no farm in general, but merely land precisely thus managed. If any of the expences run higher, or the products lower, that proportion is of course affected. The general profit of his business has no place in this enquiry, which is confined merely to such fields as are cultivated in the course assigned, and under the circumstances minuted. It is, how-

ever, of high importance, that his interests should flourish; which, in very many cases, they do not sufficiently, either from his expences being too high, or his products too low.

GRASS APPLIED TO COWS.

STATISTICAL DIVISION OF THE PRODUCE OF AN ACRE OF GRASS LAND.

Rent 16s.

Farmer's capital 5l. an acre.

Three acres supposed to carry a cow through the year.

GROSS PRODUCE.

	L.	S.	D.
Of a cow, - - - - -	8	5	0
Divide by 3 years,	£2	15	0

THE ABOVE DIVIDED AMONG

The landlord,	-	£0	13	0	net rent,
The state,	-	0	2	9	land tax,
Artizans,	-	0	0	3	repairs.
		0	16	0	gross rent.
Three years,		2	8	0	Ditto.
Industrious poor,	-	1	0	0	labour,
Indigent poor,	-	0	10	6	poor rates,
Artizans,		0	1	6	other rates,
Ditto,	-	0	4	0	wear and tear,
Carried over,	-	£	4	4	0

Brought over,	-	£	4	4	0	
The church,	-		0	12	0	tythe,
The farm,	-		0	8	0	fuel,
Ditto,	-		0	18	0	{ renovation of stock,
Ditto,	-		0	5	0	
The farmer,	-		1	18	0	team,
						£ 8 5 0

Ditto, on 3 acres, - 1 18 0

Per acre, - £ 0 12 8

Produce, - - - - - £ 8 5 0

DEDUCT AS BEFORE,

Team renovation and fuel, $\frac{5}{8}$ of labour,	}	2 17 6
$\frac{3}{4}$ poor rates, and $\frac{1}{2}$ wear and		
tear,		

Divide by 3 years, £ 5 8 6

For market, - - - £ 1 16 2

I am inclined to believe, that no calculation of grafs land can be made on any data, tolerably fair, that will not shew, as this does, the benefit to the public, of land being under grafs; here is a larger produce free for market, than in any of the preceding estimates.

SHEEP-WALK.

STATISTICAL DIVISION OF THE PRODUCE OF AN ACRE
OF SHEEP-WALK.

Rent 2s.

Farmer's capital, 10s. *per* acre.

It is extremely difficult to calculate with accuracy the produce of land which is never managed or kept distinct from the rest of the farm. In such cases, all that is possible to be done is, to approximate as near the truth as a variety of information, not founded on experiment, will allow. From such circumstances, I am inclined to believe, that the average produce of such sheep-walks in Suffolk, as let for 2s. 6d. an acre, landlord's rent, do not produce gross more than 5s. which may be called the keeping of one sheep, twenty weeks, at 3d. a week. This sum may be thus divided:

	L.	S.	D.	
Landlord,	0	2	3	net rent.
The state,	0	0	3	land tax.
	0	2	6	gross rent.
Indigent poor,	0	0	3	rates.
Industrious ditto,	0	0	2	labour.
The church,	0	0	4	tythe.
	0	3	3	
The farmer,	0	1	9	
	£	0	5	0

If this estimate approaches the truth, it explains the reason why such immense tracts remain in a state disgraceful to the kingdom. It is evidently the farmer's interest to make a large return on a small capital. Were such lands improved, he would receive a smaller return from a much larger investment. Hence arises the fact, that all landlords, when they let such wastes, should take care to fix on them a very high rent, as an inducement to the tenant to cultivate them. If favour is shewn in rent, let it be in any other part of the farm.

The real produce of such lands will never be known till inclosures are made, and sheep confined to them without folding, through the year. The question might be ascertained in that manner, with great ease.

GOOD GRASS LAND APPLIED TO SHEEP.

STATISTICAL DIVISION OF THE PRODUCE OF AN ACRE OF GOOD GRASS LAND.

Rent 15s.

Farmer's capital, 6*l.* per acre.

It is proper to observe, that there is very little land in this county thus applied ; and I insert the estimate merely by way of query, to bring to light such observations as individuals may have made on sheep-feeding good land, without the stock being folded from it.

GROSS

GROSS PRODUCE.

17 sheep, 26 weeks in summer, at	L.	s.	D.
3d. - - - - -	2	5	6
Winter, half a sheep per acre, twenty			
weeks, at 3d. - - - - -	0	2	6
	<u>£</u>	<u>2</u>	<u>8 0</u>

DIVIDED AMONG

	L.	s.	D.	
The landlord, -	0	12	0	net rent,
The state, - -	0	2	9	land-tax,
Artizans, - -	0	0	3	repairs.
	<u>0</u>	<u>15</u>	<u>0</u>	gross rent.
Industrious poor, -	0	2	6	labour,
Indigent poor, -	0	3	6	poor rates,
Artizans, &c. -	0	0	6	other rates.
The church, -	0	4	0	tythe.
The farmer, -	1	2	6	
	<u>£</u>	<u>2</u>	<u>8 0</u>	

	L.	s.	D.
Produce, - - -	2	8	0
Deduct 5-6ths labour, and			
3-4ths poor rates, -	0	4	8
	<u>£</u>	<u>2</u>	<u>3 4</u>
For market, - -			

RECAPITULATION.

	Rent.			In Market.			Gross Produce.		
	L.	S.	D.	L.	S.	D.	L.	S.	D.
Arable good dry loam,	0	15	0	1	15	10	3	13	10
Ditto strong loam,	0	15	0	1	12	0	3	10	10
Ditto sand, -	0	5	0	0	15	10	1	4	8
Grass, Cows, -	0	16	0	1	16	2	2	15	0
Sheep-walk, -	0	2	6	0	0	0	0	5	0
Grass, Sheep, -	0	15	0	2	3	4	2	8	0
				8	3	2	* 13	12	4

If in future a greater light should be thrown on these enquiries, it will probably be found, that an apprehension, very common with some persons, of grass land being, on comparison with arable, injurious to the public interests, is extremely ill-founded; and that, on the contrary, the support of great cities and flourishing manufactures very intimately depends on a large proportion of the soil being thus employed.

Comparing the sum total of the gross produce with the portion free in the market, it should appear, that the latter exceeds considerably the half of the former.

* Without including 5s. sheep-walk.

S E C T. XXI.

MISCELLANEOUS.

I OMITTED to guess (for the subject allows little more) the number of sheep in the whole county; but, as it is a point of some importance to approximate to the truth, I shall calculate thus: That the sand districts have (which is nearly the fact) one sheep to two acres; that the rich and strong loams have one to five acres; and that the fen has one to six.* Under these proportions, the numbers will be:

Sand, 270,000 acres	-	-	sheep	135,000
Loam, 500,000	-	-	-	100,000
Fen, 30,000	-	-	-	5,000
<u>800,000</u>				<u>240,000</u>

ROADS.

These are uncommonly good in every part of the county; so that a traveller is nearly able to move in a post chaise by a map, almost sure of finding excellent gravel roads; many cross ones in most directions equal to turnpikes. The improvements in this respect in the last twenty years are almost inconceivable.

OBSTACLES.

Open field lands, and common rights, and the present mode of the payment of tythes, are the chief obstacles, to a better cultivation, met with in Suffolk.

AP-

* The stock in the fens is very irregular: sometimes many, sometimes none.

5

(175)

LECT. XII.

EXERCISES.

The first exercise is to write the names of the countries of the world in alphabetical order. The second exercise is to write the names of the continents in alphabetical order. The third exercise is to write the names of the oceans in alphabetical order. The fourth exercise is to write the names of the mountains in alphabetical order. The fifth exercise is to write the names of the rivers in alphabetical order. The sixth exercise is to write the names of the lakes in alphabetical order. The seventh exercise is to write the names of the islands in alphabetical order. The eighth exercise is to write the names of the seas in alphabetical order. The ninth exercise is to write the names of the gulfs in alphabetical order. The tenth exercise is to write the names of the straits in alphabetical order.

1. Asia	2. Africa	3. Europe	4. America
5. Australia	6. Antarctica	7. North America	8. South America
9. Asia	10. Africa	11. Europe	12. America
13. Australia	14. Antarctica	15. North America	16. South America
17. Asia	18. Africa	19. Europe	20. America
21. Australia	22. Antarctica	23. North America	24. South America

The first exercise is to write the names of the countries of the world in alphabetical order. The second exercise is to write the names of the continents in alphabetical order. The third exercise is to write the names of the oceans in alphabetical order. The fourth exercise is to write the names of the mountains in alphabetical order. The fifth exercise is to write the names of the rivers in alphabetical order. The sixth exercise is to write the names of the lakes in alphabetical order. The seventh exercise is to write the names of the islands in alphabetical order. The eighth exercise is to write the names of the seas in alphabetical order. The ninth exercise is to write the names of the gulfs in alphabetical order. The tenth exercise is to write the names of the straits in alphabetical order.

The first exercise is to write the names of the countries of the world in alphabetical order. The second exercise is to write the names of the continents in alphabetical order. The third exercise is to write the names of the oceans in alphabetical order. The fourth exercise is to write the names of the mountains in alphabetical order. The fifth exercise is to write the names of the rivers in alphabetical order. The sixth exercise is to write the names of the lakes in alphabetical order. The seventh exercise is to write the names of the islands in alphabetical order. The eighth exercise is to write the names of the seas in alphabetical order. The ninth exercise is to write the names of the gulfs in alphabetical order. The tenth exercise is to write the names of the straits in alphabetical order.

A P P E N D I X.

STATE OF THE POOR.

THE most singular circumstance relating to this subject, in the county of Suffolk, is the incorporation of various hundreds, for erecting and supporting *houses of industry*. Thomas Ruggles, Esq. a friend of mine, having examined these, with great attention, is so kind as to communicate the result of his enquiries in the following memoir, which I insert as the most satisfactory mode of introducing them in this Report.

THE local inconvenience and distress arising from the number of the poor, and the expences of maintaining them, had occasioned many districts within the county of Suffolk to apply to parliament for the power of incorporating themselves, and of regulating the employment and maintenance of their poor, by certain rules not authorised by the existing poor laws; in consequence, several acts of parliament passed, incorporating those districts; the poor have been governed and maintained within those districts, according to the power given by such acts; and the conveniences and inconveniences, the benefit and the disadvantage experienced from the execution of those acts of parliament, will be explained and elucidated by the best information obtained from the districts thus incorporated.

That this might be performed with accuracy and certainty, I determined to visit all or most of the houses of industry within the county of Suffolk, that I might be able, from actual inspection and personal enquiry, to state the facts which have been experienced respecting these institutions; the conduct of them, together with the consequences which have arisen to the public from them; and to make also some observations on those facts and consequences.

The middle of the summer was the time when the excursion was made; and the houses were visited and inspected as suited convenience, from the morning to the evening. The notices taken on the spot, and the informations received since by letter, shall be stated according to the priority, in point of time, of the acts of parliament incorporating the districts, and the erection of the respective houses.

The following questions were put to all the governors of the houses of industry, and their answers to them minuted, when answered satisfactorily; and the information

mation obtained is incorporated with the general account ; except when the governor or attendant could not answer them immediately, but engaged to do it by letter :

1. How many poor men, women, and children, have been admitted since the building of the house, annually ?
2. How many have died since the same time in the house ?
3. Has any, and how much of the debt contracted by authority of parliament, been paid ?
4. Have the poor rates in the districts incorporated, been increased or diminished ?
5. What are the manufactures in which the poor are employed ?
6. Is the sale of any of these manufactures, and which of them, diminished by the war ?
7. Are the poor, or any of them, and how many, employed in agriculture ?
8. Is any particular disease epidemic, or more prevalent than another, and what is the nature of such disease ?

These questions were calculated with a view to form some judgment, whether these institutions tended to increase the chance of human life ; to diminish the poor's rate in time of peace and war ; and also to form a comparison of the probable profits arising from the manufactures of wool and hemp, in houses of industry.

Colnies and Carlford hundreds were incorporated by act of parliament, in the twenty-ninth year of his late Majesty's reign, and their house of industry in the parish of Nacton, was built in 1757, and first inhabited in 1758.

The information which could be obtained on the spot, was not of the best authority; the governor and his wife being from home when the visit was made, which was about six o'clock in the evening of the committee day.

Manufactures in this house—Cordage, sacks, plough-lines, spinning wool for Norwich.

Boys spin hemp, stinted at six-pence a day, one with another.

Girls spin wool ; great girls stinted at six-pence a day, but receive for their work only half.

In the dormitory for men and boys, two men are usually put into a bed, and three or four boys, certainly too many ; one man, or two boys, is the proper number ; probably it arose from this circumstance, that the dormitory was neither neat nor sweet ; dining hall very neat.

The poor are allowed more liberty without the walls at present, than they used to have, and are more healthy.

Five acres of land are occupied by the house ; two cows are kept.

Only one man out at work in agriculture ; no boys.

The highest poor rate in any of the parishes when incorporated, was four-pence or five-pence, quarterly.

What follows is the answer to the foregoing questions, transmitted to me by Mr. John Enefer, the governor of Nacton house of industry, by the order of Philip B. Brooke, Esq. one of the directors.

NACTON HOUSE OF INDUSTRY.

The poor are employed in wool-spinning, home-spinning, and making sacks, &c. the neat profits of which, upon an average, for the last seven years, amount to 277l. 13s. 6d. per ann.

The poor rates were at first 1487l. 13s. per ann. but advanced at midsummer, 1790, to 2603l. 7s. per ann.

The expenditure, upon an average for the last seven years, 2367l. 8s. 8d.

The original debt was 4800l. is now 4400l. and will be reduced 500l. more, Michaelmas 1793.

The men and women able to work, earn from two-pence to six-pence a day.

The children are stinted according to their abilities, and not according to age, from one half penny to six-pence a day.

Very few hands are employed in agriculture.

The number of poor admitted into the house, for the last fourteen years, amounts to 2017.

The number of deaths, for the last fourteen years, amounts to 389.

The most prevalent diseases in the house have been the small-pox, measles, hooping-cough, and fever.

The hundred of Blything was incorporated in the year 1764; and the house of industry built on a rising ground, in the parish of Balcamp, about a mile from Blithburgh.

The manufactures are woollen and linen for the use of the house, shoes, stockings, and all their cloaths; linen is made in this house, up to the value of three shillings and sixpence a yard; nothing is sold.

The house also spins for the Norwich woollen manufactures, and has earned 400l. a year.

Forty-six parishes were incorporated.

The average number of poor admitted, the first five years, amounted to about 203, annually.

There are now in the summer generally about 250, in winter about 300, in the house.

The number of men, women, and children admitted into Balcamp house since the institution, Oct. 13, 1766, total 5207.

The number of men, women, and children, who have died since the same time, total 1381.

These totals were taken from a list of admissions and deaths, transmitted to me by Sir John Rous, Bart.

Many children are admitted without their parents.

Near 800l. a year is paid to out-pensioners.

The sum borrowed was 12000l. half of which was paid off in 1780; the whole in 1791.

The average of the poor's rate annually, at the first incorporating the hundred, was not above one shilling in the pound; this rate was diminished one-eighth in 1780, when half the debt was paid.

None

None of the poor are at present employed in agriculture.

In 1781, a putrid fever broke out in the neighbourhood: this house lost by it one hundred and thirty of its inhabitants; the town of Blithburgh one-third of its inhabitants.

Twenty-five acres of land belong to the house, which, together with thirty-one acres hired, are occupied, some for the plough, some pasture and garden.

The hundreds of Mutford and Lothingland were incorporated in 1764. The house of industry is in the parish of Oulton, near Lowestoft, and has been built twenty-seven years.

The number of parishes incorporated is twenty-four.

Yearly income about 1200l. of this near 200l. arises from the earnings of the poor.

Sum borrowed, 6200l. Expences in building the house about 3000l. It is erected on a frugal plan, and will contain about 200 poor.

Not more than 100 were admitted annually for the first seven years; the number now amounts to about 150.

1700l. of the original debt has been paid; besides 300l. a debt contracted when the house was under bad management.

The poor's rate was advanced, in 1781, ten per cent. on the original assessment, and has not been diminished; but the debt continues diminishing at the rate of 300l. annually.

The register of deaths has not been regularly kept during the first years of the institution; but the average number, during the last six years, has been eleven annually.

The manufactures are, making nets for the herring fishery. The merchants furnish the twine, and it is braided by the yard.

The hemp which they grow is also manufactured in the house; but lately the weaving has been put out.

Woollen yarn is also spun, but the trade is at present bad; therefore only such are employed in spinning wool as can do nothing else.

A child's stint, either for braiding nets, spinning yarn or hemp, is four-pence a day. Several children, not above seven years of age, were employed in braiding.

Sometimes some of the poor are let out to work in husbandry at sixpence a day: their employment chiefly weeding.

The weekly earnings of the house, on an average, 4l.

Out-allowances were, last year, 55l. and are encreasing, but supposed to be injurious to the establishment.

Land in occupation twelve acres, all arable; two yearly sown with hemp. No cows kept; their butter and milk bought.

The hundred of Wangford incorporated 1764.

Shipmeadow house of industry, between Harleston and Beccles, has been built twenty-six years.

The number of parishes incorporated, 27.

Annual income from their rates, 1750l.

Annual amount of labour, about 156l.

Number of paupers in the house, about 200.

Deaths in a year, about 20.

There is no manufactory in this house; but their employment is spinning for the Norwich manufactures.

Out-allowances about 80*l.* a year.

Children are taken into the house from large families, instead of relieving those families by out-allowances.

Original debt 8500*l.* of which 4000*l.* is paid off.

Land, forty-five acres, of which twenty-seven are arable: five cows are kept.

The house has no chapel; but they attend the parish-church.*

Loes and Wilford hundreds, incorporated in 1765.

The house of industry in the parish of Melton, erected the same year, is on a more extended and expensive scale than any of those which have hitherto been examined. Their dining-hall is very spacious and neat; as are the dormitories. There are apartments appropriated to the surgeon. The governor's apartments are large and convenient. The cellars are excellent. There are good rooms for the boys and girls schools; and there are also apartments fitted up and appropriated as penitentiary lodgings for refractory people, and those who may be guilty of offences requiring solitary restraint, under authority of the act of parliament which passed in 1790, enabling the incorporated hundreds to borrow an additional sum of money.

The manufactures are linen and woollen: the first principally for their own use; the last is considerably affected by the war.

The number of poor in the house is from 230 to 240.

The average number of deaths, for the last three years, is about sixteen annually. The governor could not give any information, in this respect, farther back, not having been there longer.

The out-allowances are large; and, by the last rules and orders drawn up for the regulating the proceedings of the directors and acting guardians, printed in 1792, although they seem to have limited the sums to be allowed, with prudence, they do not seem to have been equally careful that the number of paupers, who receive out-allowances, shall be reduced, by obliging them to come into the house. These out-allowances are the cause of the increase of expence, and tend to the old system, to avoid which was the occasion of erecting these houses. By a letter I was favoured with from the Rev. Dr. Frank, of Alderton, it appears, that the original debt of these hundreds was 9200*l.* The present debt is 10,050*l.* That the maximum of the poor's rates, in the incorporated hundreds, was not more, including Marshalsea money, &c. than fifteen-pence in the pound annually, estimating at rack-rents, when the hundreds were incorporated, and that they remain the same. A surgeon and schoolmaster reside in the house.

There were between thirty and forty in the sick-wards, mostly confined by the infirmities natural to age; but sore legs were the prevailing complaint among them.

The poor children were taught different trades in the house, besides the manufactures; such as making clothes, shoes, &c. Three poor men are employed in agriculture.

Quantity of acres belonging to the house about thirty. Three acres of hemp are grown annually, and manufactured; about an acre and a half of garden; the rest pasture. Six cows are kept.

The

* Oulton and Shipmeadow houses of industry were visited, and the notices of them taken by a friend who accompanied me to the other houses of industry in the county.

The late governor considerably injured the revenue of this house by his management of the manufactures.

Samford Hundred, incorporated 1765.

The house of industry erected 1766, in the parish of Tattingstone, and opened for the reception of the poor at Michaelmas in the same year.

The original sum borrowed was 8250l. of which 2450l. has been paid.

The number of parishes incorporated is twenty-five.

The yearly assessments 2262l. 18s. 6d.

The rates were settled in 1766, at 2s 8d. in the pound by the year, and remain the same.

The average number of poor in the house, and the number of deaths for the same years.

In the Year	Poor in the House.	Deaths.
1786,	280	47
1787,	251	12
1788,	262	26
1789,	262	32

The average number of poor admitted from 1766, annually, could not be exactly ascertained, but is about 260. The average number of deaths from the same year, annually, is 37 and a fraction; but the small-pox, attended, or rather followed, by a putrid fever, has been in the house three years, viz. in 1780, 1781, 1791, when the number of deaths each year was 76, 81, 56.

The poor are principally employed in spinning for Norwich; the profit on which was,

	L.	S.	D.		L.	S.	D.
In 1786,	-	-	514	9	11		
1787,	-	-	509	0	3		
1788,	-	-	407	18	9		
1789,	-	-	401	16	7		
				L.	S.	D.	
Out-allowances the same years,			186	6	4 $\frac{1}{2}$	240	17 10
			320	4	9	294	19 9

Income and Expenditure the same Years.

	Income.			Expenditure.		
	L.	S.	D.	L.	S.	D.
In 1786,	2838	12	4	2575	18	6
1787,	2857	5	5	2722	14	4
1788,	2737	2	9	2938	3	3
1789,	2721	2	9	2907	12	4

There are at present eleven packs of top-work, value about 300l. left unfold, on account of the stagnation of the Norwich trade.

Only two men and three boys are at present employed in agriculture.

The officers of the house are, a governor, surgeon, chaplain, matron.

In the dormitories, which are large, there are two or three windows in each, opposite to the general range of windows; these have a great effect in keeping the rooms airy and sweet.

There were no sick in the Infirmary.

The land belonging to the house is thirty-six acres.

The hundreds of Bosmere and Claydon were incorporated in 1765.

The house of industry was erected in 1766, in the parish of Barham, and opened for the reception of the poor in the month of October the same year.

The original sum borrowed was 9994l. of which 7294l. has been paid off.

The number of parishes incorporated is thirty-five.

The yearly assessments 2561l. 4s. 10d.

The poor's rate remains the same.

The average number of poor in the house, and the number of deaths for the same years.

	Poor.	Deaths.
In the year 1787,	200	34
1788,	246	35
1789,	247	32
1790,	247	55
1791,	213	72
1792,	179	25

The small-pox was the occasion of the increased number of deaths in the years 1790 and 1791.

The information received on this head was, that the poor in general were very averse to inoculation; therefore, when the pest-house (one of which each house of industry has) is full, there were no means to prevent the disease going through the house of industry itself; the consequence has been a considerable mortality, but probably not greater than when the same disease has attacked the village-poor, and its fatal effects have not been prevented by inoculation. The Barham-house has now two pest-houses at a little distance from it.

The poor are principally employed in spinning for Norwich. Their profit has been, on an average, about 200l. annually; but for the half-year ending at Midsummer 1793, only 72l. 1s. 8d.

		L.	S.	D.
Out-allowances,	1786,	323	3	8
	1787,	308	3	2
	1788,	357	3	10
	1789,	377	6	10

Income and Expenditure for seven years.

		Income.			Expenditure.		
		L.	S.	D.	L.	S.	D.
1786	-	2959	12	0	2380	13	0
1787	-	2905	2	0	2175	8	6
1788	-	2857	14	6	2574	7	0
1789	-	2876	8	0	2587	5	0
1790	-	2908	16	11	2622	10	2
1791	-	2890	10	0	2529	18	10
1792	-	2920	13	6	2810	10	3
Total,		£20318	16	11	£17680	12	9
		L			Profit		

Profit to the house in seven years, ending in 1792—2638l. 4s. 2d.

There were more women between the ages of twenty and thirty years in this house, than in any of the other houses of industry.

Seventeen aged and infirm people were in the sick wards.

Land belonging to this house, twenty acres, of which two acres were garden; six cows were kept.

The hundred of Cosford and the parish of Polsted incorporated in the nineteenth year of the present reign.

The house of industry is situated in the parish of Semer, and was erected in 1780.

The original debt was 8000l. is now reduced to 180l. and an annuity of 20l. payable to a person upwards of sixty years of age.

The poor's rates have been reduced three eighths; and a considerable fund remains in hand.

The poor in the house are employed in spinning wool, which is washed and combed in the house; and the yarn is sold at Norwich by commission; but the sale has been considerably affected by the war: a considerable quantity now remains in hand.

The poor, who are able, are employed in agriculture, when an opportunity offers.

The average number of paupers generally in the house, is about one hundred and eighty.

The average number of burials annually, since the institution, is about twenty-six; the much greater proportion died the first two years, after the house was inhabited, which was attributed to too much meat diet being allowed to the paupers after their first coming into the house, after having suffered extreme poverty; this cause has been since guarded against, and the burials have considerably decreased.

The house has been free from any epidemic disease, since it has been inhabited; when the small-pox has been prevalent in the country, there have been two general inoculations in the house, with great success each time.

When I visited this house of industry, the governor was from home; as was the Rev. Mr. Cooke, the son of that worthy magistrate, who from the first institution of the house, to the time of his death, regulated the management of it with so much attention, as to make it productive, in the shortest space of time, of more beneficial effects than any other in the county of Suffolk. It was from an answer to a letter, I took the liberty of writing to this gentleman, that the foregoing account has been extracted; the information obtained, and observations made on the spot, shall follow from my own notes.

The chief employment is spinning yarn for Norwich; but some of the top work is wove into serge for the women's jackets.

Course thickset is bought at Norwich for cloathing; linen cloth for shirts and shifts, at the market town of the hundred.

Poor in the house, July 25, 1793. Men, 27, women 42, children 22 between the ages of 12 and 20, under the age of 12 years 74; in all 165.

No men are out at day labour; four boys are scaring birds at the wages they can earn by spinning, which is five pence a day. Girls at the age of thirteen are put to service, boys at the age of fourteen.

Twenty-two packs of yarn remained unfold, valued at about 600l. Land belonging to the house, about twelve acres; of which two are garden, ten meadow and pasture.

Hartsmere,

Hartsmere, Hoxne, and Threading hundreds, incorporated in the 19th of the present reign.

There is no house of industry erected. Owing chiefly to the difficulty, at the time of incorporating the hundreds, of borrowing money, several parishes in the hundreds have erected workhouses for setting to work and maintaining the poor; and, in general, it is supposed by the incorporated hundreds, that this plan is equally, if not more beneficial to the respective parishes, than if they had built a house of industry, as they were empowered to do by the act of parliament incorporating them. For this information, I am obliged to a letter from the Rev. Mr. Chevalier, of Aspall.

The hundred of Stow, incorporated in the 20th of his present Majesty's reign. The house of industry in the parish of One-house, opened for the reception of paupers, Oct. 11th, 1781.

The sum first borrowed was only 8000*l.* but the expence of building the house, so much exceeded the sum intended to be laid out for that purpose, that an additional debt of 4150*l.* was afterwards incurred; and the rates were increased one-fourth, by common consent, for three years: they remain now the same as they were at first. Fifteen hundred pounds have been paid of the debt.

The poor are employed in spinning top work for Norwich; the wool is bought by the house; and the cloathing for the use of the house is made from the refuse of the wool, and such spinning as is unfit for the Norwich manufactory; their best rugs are also made from these materials: no part of their cloathing is put out to be made except stockings.

The sale of their spinning is considerably affected by the war; twelve packs were left in the house unfold the latter end of July, the value of which is about 24*l.* a pack.

None are employed in agriculture at present; only two men are in the house, who can do harvest work; some children are sometimes employed in weeding; all who are able are employed in hop-picking; but it is conceived that nothing is saved by such employment.

The average number of paupers in the house about two hundred.

The number of burials since Oct. 11, 1780, to August 1, 1793, as follows:

Oct. 11, 1780, to Jan. 1, 1781,	8
In the years	
1781	25
1782	51 a putrid fever.
1783	61 a putrid fever.
1784	51 a putrid fever.
1785	14
1786	2
1787	17
1788	15
1789	11
1790	13
1791	19
1792	18
To August 1st, - - 1793	17

These form, taking the fractions of a year in 1780 and 1793, as one year, an average of $24 \frac{2}{3}$ th yearly; or omitting the three years when the putrid fever prevailed, the average of the remaining ten years is only $15 \frac{1}{6}$ th.

Annual income from rates, 1987l. Ditto from labour, manufactures, &c. 350l. or thereabouts, for the last ten or eleven years; but the last half year has amounted only to 104l. owing to the stagnation of the Norwich manufactory.

The out allowances arise from 250l. to 300l. annually, and are increasing, and likely to continue so during the stagnation of the Norwich manufactory.

There has been no fever or epidemic disorder in the house since 1784, although there has been much sickness in the hundred; nor were there in the house, at the time these notices were taken, any of the poor so ill as to be confined to their beds.

The number of acres belonging to the house is twenty-four; of these, three and a half are arable, one acre garden, the rest pasture.

Four cows are kept, and two horses.

A schoolmaster to teach the children to read, and a mistress to teach the little children, are constantly in the house.

Relief is given to large families, by taking those children into the house which are a burthen to their parents; the same method is also practised by all the houses of industry; consequently the children are taken very young.

In this house the spinning rooms and working rooms are divided by partitions, in such a manner that few spin or work together; the dormitories are also divided in the same manner; this is an improvement not observable in any other of the houses of industry, and tends much to the preservation of health and order.

In the incorporated hundreds, the houses of industry strike one in a different light from the cottages of the poor; they are all of them built in as dry, healthy, and pleasant situations, as the vicinity affords; the offices, such as the kitchen, brewhouse, bakehouse, buttery, laundry, larder, cellars, are all large, convenient, and kept exceeding neat; the work rooms are large, well aired; and the sexes are kept apart, both in hours of work and recreation.

The dormitories are also large, airy, and conveniently disposed; separate rooms for children of each sex, adults and aged: the married have each a separate apartment to themselves; mothers with nurse children are also by themselves.

The infirmaries are large, convenient, airy, and comfortable; none without fire places.

All the houses have a proper room for the necessary dispensary, and most of them a surgeon's room besides.

The halls, in all, are large, convenient, well ventilated, with two, or more fire places in them, and calculated, with respect to room, for the reception of full as many as the other conveniences of the house can contain.

The chapels are all sufficiently large, neat and plain. Several of them rather tending to grandeur and elegance; there were two houses which had no chapel; one of them made use of a room ample enough for the congregation, properly fitted up, and kept very neat; the other houses attended the parish church.

The apartments for the governor were in all the houses large, and conveniently disposed; in one or two of the houses of industry, these apartments were rather more spacious and elegant than necessary; there are also convenient storehouses and warehouses, for

for keeping the manufacture of the house; the raw materials and the cloathing, &c. for the use of the inhabitants.

The land about the houses belonging to them, particularly the gardens, are all calculated for producing a sufficient quantity of vegetable diet; so necessary to the health, as well as agreeable to the palate of the inhabitants.

In general, the appearance of all the houses of industry, in the approach to them, somewhat resembles what we may suppose, of the hospitable large mansions of our ancestors, in those times when the gentry of the country spent their rents among their neighbours.

The interior of these houses must occasion a most agreeable surprise to all those who have not before seen poverty, but in its miserable cottage, or more miserable work-house.

In looking over my notes, I find that the affirmative neatness, which prevailed from the cellar to the garret, in all the houses, with very few exceptions in particular departments, occasioned not only a memorandum of the fact, but gave rise to a conception, which possibly lies more in imagination than reality; that where a deficiency in this respect is observable in any domicile, a concomitant deficiency is also observable in the healthy looks of the inhabitants.

This neatness, which had so pleasing an effect on the eye, was the cause also, that the other senses were not disgusted by that constant attendant on collected filth and foul air, a noisome stench; as deleterious to human life, as it is in general nauseating to those who accidentally breathe such an atmosphere.

The practice of frequently white-washing does much in preserving the air of these houses wholesome and sweet; but the constant attention of those who perform the offices of the house, is absolutely necessary; and even that is insufficient, unless the halls, working rooms, and dormitories, have the external air admitted through the windows, whenever it can be done with safety to the inhabitants, with respect to catching cold. This practice of keeping the windows open cannot be trusted to the paupers themselves; for, strange to tell! the general complaint against them was, that they would, not only, not attend to keeping them open, but if the adults and aged had their choice, such depravity arises from habit, that they would live in that atmosphere of putrid air, which would undoubtedly produce contagion.

The neatness and *propriété* which prevailed in their halls at the hour of refection, were as so laudably observable; most of these houses of industry being visited at the hours of breakfast, dinner, or supper. At times I have felt disgust, when requested to take some refreshment which has been offered me in a cottage; a disgust arising from the absence of that neatness which attends the tables of those among whom it has been my lot to live; but no want of neatness in these houses created disgust; a breakfast, dinner, or supper, might have been ate at their tables with a keen appetite.

Their bread was in all the houses particularly pleasant; it was good brown bread; made from the flour deprived of the coarsest of its bran; white bread was also baked for the infirm, the convalescent, and young children.

Their cheese was in general good, although frequently the cheese of the country. In one house they bought Dutch cheese, which was stronger in its taste, and consequently, to some palates, not so pleasant. The small beer was also pleasant; no wonder, they bought the best malt and hops, brewed a large quantity at a time, and kept it in excellent

lent cellars. Ale was also brewed in inferior quantities, and given to the convalescent, and to those whom the governor thought proper, either as a necessary refreshment, or as a reward: and it was also distributed at stated times to the whole house.

It did not occur to me to take minutes of the bill of diet in any of the houses, because no doubt has been suggested that it is not wholesome and sufficient. That, in some instances, it has been too abundant, may be suspected, as well from the relicts which were seen after their meals, as from the idea thrown out by one of the directors in a letter which has been alluded to.*

The application of these facts, which have been stated, as well upon the credit of personal inspection, and information from those whose duty it certainly was, and whose inclination it appeared to be, to give true and full information upon the subject, as from those gentlemen also who obligingly communicated any information by letter, now remains to be made to three important queries.

1. Have these institutions amended the morals of the poor?
2. Have they tended to diminish the burthen of expence to society attending their relief and maintenance?
3. Have they increased, or do they tend to decrease, the chance of human life?

With respect to the first question, it may be answered in the affirmative, without a possibility of contradiction.

They have amended the morals of the lower orders of people; if the proportional few instances of indictments at the quarter-sessions, for actions of inferior criminality, which lead to greater crimes, will prove the fact.

If the general good order and regulation the labouring poor are kept in throughout the incorporated districts, which good order is evidenced by their general conduct and conversation, and by their observation of those laws, the breach of which may tend to endanger the lives and diminish the safety and comfort of his Majesty's subjects in general; such as drivers riding on their waggons, tipling in ale-houses, and the smaller immoralities and improprieties of conduct---if such attention to the orders of society proves the fact. If the respectful and civil behaviour of the poor to their superiors, the very rare instances of children being seduced to steal wood, turnips, &c. and to the commission of other small thefts; if these, and similar proofs of good morals, unfortunately not prevalent in those districts within the county, where these houses are not instituted---if such instances prove the fact, experience tells us these institutions have tended to reform the morals of the poor.

And the prophetic spirit of theory had before-hand informed those, who wished to form a judgment on the subject, that the effect could not be otherwise.

A large building, calculated for the reception of the poor of the district, situated in the most healthy situation, with convenient offices of all kinds, the inhabitants of which are under the regulation of well-chosen officers, subject to excellent rules, all of them calculated to promote regularity, industry, morality, and a religious sentiment. The hours of work, refreshment, and sleep, uniform and regular.

The children, from the earliest age, on leaving their mother's arms, are under the care of proper dames, who teach them obedience, and give them the habits of attention.

When

* See the extract from Mr. Cook's letter respecting the Semer-house of industry.

When more advanced in years, schoolmasters teach them to read; and the superintendants of the working-rooms, some industrious employment, and take care that their hours of work shall not be passed in idleness. Here they are generally stinted, so that greater industry is rewarded with greater leisure.

The duties of religion are expected to be regularly attended by all the poor of all ages, no excuse being admitted but illness.

It required no prophetic spirit to foretel, that these duties, and this system of regularity, being persevered in, the best effects must of consequence ensue to the morals of the poor of all ages, and to those of the rising generation in particular.

To determine the second question with certainty, recourse must be had to the notices taken respecting the fact, in the different incorporations; and it will be found, that, in some, the poor's rates have been diminished; in others, they remain the same as at the time of the institution; and, in a few, the rates have been increased: the different instances shall be pointed out, and some observations made on the facts as they have been stated.

Blything hundred, Bulcamp house of industry; the whole debt, 12,000*l.* has been paid off; the rates were diminished one-eighth in 1780; and as they were not, on an average, above one shilling in the pound annually, when first incorporated, they are now inconsiderable.

The hundred of Cosford, and the parish of Polsted; the house of industry at Semer; the whole debt, 8000*l.* has been paid off, except an annuity of 20*l.* a year, and 180*l.* but they have stock more than sufficient to discharge these remaining demands; the poor's rates have been diminished three-eighths; and the rates were very moderate when the hundred was incorporated.

Wangford hundred; house of industry at Shipmeadow; original debt 8500*l.* of which 4000*l.* is paid. Rates remain the same.

The hundred of Samford; the house of industry at Tattingstone; the original sum borrowed 8250*l.* of which 2450*l.* have been paid. The rates were settled at 2*s.* 8*d.* in the pound annually, and remain the same.

Hundreds of Bosmere and Claydon; the house of industry at Barham; the original sum borrowed 9994*l.* of which 7294*l.* have been paid. The rates remain the same.

Stow hundred; the house of industry at One-house, near Stowmarket; the original sum borrowed 12150*l.* of which 1500*l.* have been paid. The rates remain the same.

Hundreds of Colneis and Carlford; the house of industry at Nacton; the original debt was 4800*l.* is now 3900*l.* The rates were increased at Midsummer 1790, from 1487*l.* 13*s.* 4*d.* annually, to 2367*l.* 8*s.* 8*d.* But from information it appears, that the rates were not more than sixteen or eighteen pence annually, when the average was fixed; and the revenue of the house has exceeded its expenditure, on an average of the last seven years, 513*l.* 11*s.* 10*d.* annually.

Hundreds of Mutford and Lothingland; the house of industry at Oulton; the original debt 6500*l.* of which 2000*l.* has been paid off. The poor's rates are advanced ten per cent; but three hundred pounds of the debt is annually paid off.

Hundreds of Loes and Wilford; the house of industry at Melton; their original debt was 9200*l.* their present debt is 10,050*l.* Their poor rates, together with their county rates, do not now exceed fifteen-pence in the pound at rack rent.

By

By this recapitulation it appears, that, at two of the houses of industry, the rates have been considerably diminished, and the original debt annihilated.

At four, the rates remain : but a considerable part of the original debt has been paid.

At two, the rates have been increased, and the debt diminished. At the last house of industry, the debt has been increased, and the rates remain the same.

The question, whether houses of industry tend to diminish the expence of the relief and maintenance of the poor, is therefore answered in the affirmative ; since in two the rates are diminished, the debt is paid ; in four, the debt has been considerably diminished, consequently the annual balances in their favour might have been applied to the purpose of diminishing the rates, *pari passu*, with the debt : in two of the others, the balances have been applied hitherto to diminish the debt only, and the rates have increased : in one, the debt is somewhat increased, and the rates remain the same, at the low average of fifteen-pence in the pound annually.

When the average at which these parishes settled their rates at the time they were incorporated, and the number of years which have elapsed since that average was settled, are considered ; in some, being between thirty and forty years, and in none less than twelve or fourteen, and compared with the proportion the rates then bore to a pound, and the proportion they would now bear, had there been no house of industry, taking the advance of the poor's rate in the other parishes throughout the kingdom in general, and in Suffolk in particular, as they are proved to be by the returns of the overseers to the inquiries made by parliament in the years 1776, and 1783, 4, and 5 ; as the rule of computation, and no better can be obtained, in which returns it appears, that, in the two contiguous hundreds in Suffolk, not incorporated, Risbridge and Babergh, the *nett expences* of the poor alone had advanced from 11,023l. 7s. 11d. to 13,840l. 3s. 9d. being a difference of 2817l. or thereabouts, in the course of eight years ; or above 25l. 9d. per cent. an advance that brings forward the most unthrifty management of any of the houses of industry into a state of positive prosperity and reduction of expence. It will therefore be found, that not only where the rates have been stationary, but where they have advanced, and in the instance, where the debt has increased, the poor's rates have been very much decreased from what they would have been, had the poor been managed according to the old and common system ; we may therefore, with certainty, apply the old adage, *non progredi est regredi*, with respect to the expences of the poor in all the incorporated houses of industry.

On the whole, although, in an instance or two, originating from an improvident mode of building the houses of industry at first, more subsequent expences have been incurred than were at that time foreseen, and consequently a larger revenue became necessary to pay the interest of the additional sum they were obliged to borrow, and to support the expences of the house, than was at first thought sufficient ; and, in another instance, the dishonesty or profusion of the then governor has so disarranged the affairs of the house, as to render a new loan, and consequently an increased rate, convenient ; yet, on the whole, it is conceived, that not the least shadow of doubt can be raised, but that, even in these instances, the revenue of the houses are increasing beyond the disbursements ; the debt is diminishing, and the rates will fall even beneath that low medium they have hitherto preserved ; and which rates, had there been no house of industry, would probably have risen twenty-five, or even fifty per cent. above their present amount.

The

The other question, Whether the houses of industry have increased the chance of human life? involves in it such complicated considerations, is a question of such uncertainty of proof; a comparison with the state of population in country villages, and with the chance of human life of people of particular ages, and particular situations only, and not with human life in general, being to be taken into consideration; and there being no data with which the comparison of the facts can be made, the tables of the chance of human life being of too general a nature; and the facts themselves, as to deaths, in houses of industry, not being sufficiently particularised as to age and state of patients health when admitted, to give an exact result, that some general observations on the deaths which have happened in these houses, compared with the numbers admitted, is all that shall be attempted; leaving the reader to make up his own mind, as well as he is able, from the imperfect sketch of the question it is in my power to offer; to which I shall very humbly add my opinion, without presuming to dictate any positive conclusion to his judgment.

And, first, it will be proper to pay some attention to the situation of the poor and their families, before they take refuge from the misery of extreme poverty in a house of industry; what are at that time their expectations of health and life?

They are so reduced by poverty as not to be able to maintain themselves and their families, and therefore they become inmates of a house of industry, consequently the constitution, both of parents and children, must have been debilitated, by want of necessary food, raiment, and shelter, that none can be said to be admitted in sound health; no estimate can, therefore, be made of their chance of life, in comparison with the inhabitants of villages, towns, or cities, in general.

They are afflicted with disease, either parents or children, and therefore they are sent by the parish-officers to a house of industry: the chance of life with such is still decreasing.

Children are born, and, at the earliest age at which they can leave their mothers, are received in these houses, and are kept in them through that period when the chance of human life is least; and much the greatest number in all the houses is composed of children.

The other considerable class is composed of the aged, and the infirm, either from age or accident. The chance of life, in this class, is small indeed.

Such are the different situations of the inmates in a house of industry. Very few poor, between the age of fifteen and fifty, are seen there, except diseases, accidents, infirmities, or particular irregularities of life, have occasioned them to be sent there.

The chance of life, to people in these situations, and of these ages, under the pressure of penury, although not absolutely chilled by the cold hand of extreme poverty, would, in their miserable cottages, be small indeed. Is that chance diminished or increased by going into a house of industry?

Is the chance of human life increased or diminished, by being brought from an unwholesome starving diet to wholesome moderate plenty? from nakedness to cloathing? from filth to cleanliness? from cold to warmth? from the noisome contagion of a filthy cottage, or parish-workhouse, to a healthy air, free from noxious effluvia? Surely the answer to these questions would at once determine the point, did it depend on theory only.

M

But

But it may be said, The question has been tried by the touchstone of experience; one single page of which, honestly recorded, goes farther towards proof-positive, than volumes of theoretic reasoning; we must therefore have recourse to this best of demonstration.

The solidity of this observation must be allowed, were the facts produced of mortality, in houses of industry, capable of being compared with the deaths of people under similar circumstances, and of similar ages, at large.

In Nafton house of industry, the number of poor admitted, the last fourteen years, are 2017; the number of deaths 384. The annual average of inhabitants is therefore 144; of deaths, 27.

In Bulchamp house of industry; the number admitted since the institution in 1766 to 1793, twenty-seven years, 5207; the number of deaths in that time, 1381; but in the year 1781, and 1782, a putrid fever carried off one third of the inhabitants of Blithburgh, and 217 of the inhabitants of this house; therefore those two years should be omitted in the comparative statement. The numbers will then stand: of inhabitants admitted in 25 years, 4725; of deaths 1064; or annually, inhabitants, 189; deaths 42.

Oulton house of industry; number of inhabitants on an average, annually, about 150, the last six years; of deaths for the same period, annually, 11.

Shipmeadow house of industry; number of poor about 200 annually; number of deaths about 20 in a year.

Melton house of industry; number of poor in the house from 230 to 240; the number of deaths for the last three years about 16 annually.

Tattingstone house of industry; average number of poor in the house annually for 23 years, 260; average number of deaths annually for the same time 33. In this computation the three years are omitted when the small pox and putrid fever prevailed; the deaths, in the three years when these contagious distempers were so fatal, bring the average number of deaths up to $37\frac{2}{3}$, as has been stated in the notices respecting the houses.

Barham house of industry; average number of poor inhabitants annually for five years, as appears by the notice, 222; average number of deaths, 42. In this house also the small-pox prevailed for two years, and destroyed 127 of the inhabitants; the average of deaths otherwise would not have been so high.

Semer house of industry; average number of poor inhabitants in the house annually, from its institution, 180; annual number of deaths 26.

Stow house of industry; annual average number of poor inhabitants in the house, about 200; of deaths annually, 24; but in this house a putrid fever prevailed three years, and was fatal to 163 people; the average omitting these three years, and taking it for ten years only, is 15 in a year.

In the nine houses of industry, which have been the objects of our attention, there are constantly, one year with another, 1780 poor inhabitants, men, women, and children.

In the same houses, there happen annually two hundred and forty-five deaths, as the number appears by the averages taken.

The number of deaths to the number of inhabitants annually in all the houses of industry in Suffolk, is therefore as 1 to $7\frac{1}{3}$, or nearly one-seventh of the number dies every year.

It

It should be recalled to the reader's mind, that the inhabitants are composed of children from birth to the ages of 12, 13, or 14, when they are bound apprentices or get services. The chance of life in this early age is such, as in the healthiest towns not half the number is alive at the age of 13, as appears from the tables in Dr. Price's Supplement to his Observations on Reversionary Payments; of old people whose work is done; and of poor of all ages, who from sickness and infirmity are unable to maintain themselves; such being the description of paupers admitted into these houses of industry. It must again be observed, that no comparison can be made between the chance of life of such inhabitants, and of those inhabiting in cities, towns, or villages, in general; because, in the first instance are comprised only the very young, the very old, and the infirm and diseased; and these are also poor, and of impoverished blood, and constitutions weakened by the effects of poverty; whereas the tables in Dr. Price's Supplement to his Reversionary Payments, and in the publications of other political arithmeticians, comprehend people of all ranks, orders, and situations in life, as well the healthy and the robust, as the infirm and the diseased; as well people of all classes, at those periods, when the chance of human life is greatest, as at those when it is the least.

The question of the comparative chance of human life, in these houses, must, therefore, be left undetermined by any comparison with such chance in general; and probably the question would be more fairly tried, could a comparison be made between the mortality in the parishes incorporated, before such incorporation took place; and such mortality since; taking into the account the number of the poor of each parish who have died in the houses of industry.

The effect these institutions have had with respect to population, might also, by means of such comparative researches, be more accurately ascertained, were it likely that such enquiries would be attended by certain information; which probably might be the case with respect to the comparative number of deaths, by means of the parish registers, and the books of the respective houses; but that part of the question which respects comparative population, could not, by any direct inquiry, be ascertained; and can only be computed from the births and burials in the parishes, which would afford by no means an exact result.

On the whole, this question must be left in doubt for the present. To judge from every appearance attending the interior of the houses of industry, no one could hesitate to declare, that they must tend to increase the chance of human life, and to increase the population of the districts; the same judgment must be deduced from all theoretic proofs; reasoning from probable, nay, almost necessary consequences. But when the comparative number of the living to the dead, taken annually, appears to be only as seven and one-third to an unit; or in other words, that the chance of life in a house of industry is not equal to eight years, the fact strikes strongly, and occasions the judgment upon the question to remain suspended.

But still two great points are determined in their favour; they certainly tend to meliorate the morals of the poor, and they also tend to diminish the burthen of the expence attending their maintenance. That the other point is not on experience determined in their favour also, arises from the difficulty of acquiring every information necessary to its investigation; and from the inability of the writer to apply, with precision and certainty of proof, such facts as he had obtained. He still believes that this point will, whenever it falls under the pen of a more accurate enquirer, and able political arithmetician, conduce also to the recommendation of district incorporated houses of industry, as tending to increase the chance of life and population.

I cannot take leave of this subject, without animadverting upon some information received, respecting the dissatisfaction of the poor at the first erection of houses of industry; which broke out in riotous proceedings, and in some instances, occasioned a great additional expence to the incorporated hundreds; the spirit of riot having proceeded so far as to pull down the buildings erected, and to commit other flagrant acts of outrage. It is a well known fact, proved by long experience, that the class of people constituting what is called a mob, is never collected and excited to mischief but at the instigation of an individual, or some few individuals, who poison the minds of their uninformed but well meaning neighbours; these are men generally of a class a little superior to the mob itself; they are men who mix in conversation with them at the ale houses, at the shopkeeper's, and at the barber's shops; are in general interested cunning people, who, under the mask of great humanity, tender affection, and kind regard for their poor neighbours, instigate them to these and similar acts of outrage. Examine the situations in life, the habits, the connections of these people, when their secret machinations are discovered, by the effects of open riot and mischief, and they stand the confessed encouragers of the mob. It must strike every inhabitant upon the spot, that a trifling degree of attention to the conduct of this description of people, would have demonstrated before the fact, that those very individuals would be guilty of that clandestine incitement of the mob of the neighbourhood, to the very deed of riot which has been committed; and consequently, it would be proper, in a district where such an incorporation is intended, to be watchful of the conduct and conversation of that description of men, whose interests will be most injured by a plan of this nature; and to oppose the effect of their conversations on the minds of the poor, by every means which prudence can devise and the laws will sanction.

Was any additional inducement wanting to recommend district houses of industry, the particular situation and temper of the times would be that inducement. The lower orders of the kingdom are now pressing on the neck; and the toe of the peasant truly galls the kibe of the courtier. That relief which formerly was, and still ought to be petitioned for as a favour, is now frequently demanded as a right; that idleness and intemperance which formerly feared to be observed, now obtrusively presses forward to fight; the pauper is no longer satisfied with his allowance, nor the labourer with his hire; the faint rumour of distant atrocities, which disgrace human nature, reaches the ear of the multitude, cleansed from the blood and carnage, and assumes to them the pleasing shape of liberty and property. The only class of men who have the power to calm the rising storm, are those in the middling ranks of life; and they are as much interested to preserve things as they are, as any other rank in the state. Property is the only solid bulwark of the nation; for, those who possess it have a natural desire to preserve it, and our laws and our constitution must stand or fall with it; besides, the danger lies immediately beneath this description of people. District houses of industry consolidate all the men of property resident in the county in the same laudable plan; the preservation of industry, good order, and a religious sentiment among the million. The few gentlemen of fortune who reside in the county, meritotiously take an active part in all the incorporated houses; the beneficed clergy resident there also do the same; and it does them honour, for it is equally their duty as their interest; so also do the more opulent yeomanry of the country, a body of men of the first consequence to the preservation of peace and order. Permit, therefore, an individual who thus freely declares his sentiments on a subject not generally understood, to assert, without the imputation of presumption or arrogance, that equally the duty as the interests of government call on them to encourage these institutions, by every mode in their power.

